ORDER NO. VRD9210M156

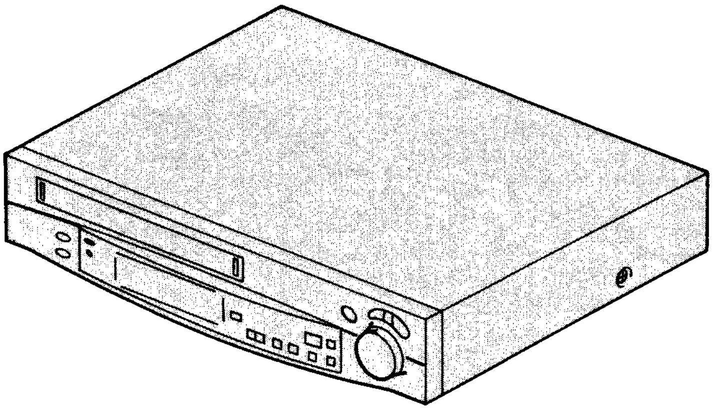
Service Manual

Video Cassette Recorder

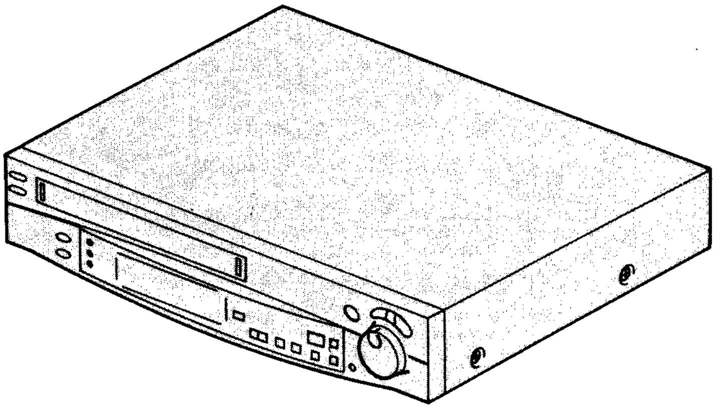
Panasonic VHS PAL HQ

General Description
Adjustment Procedures
Block/Schematic Diagrams
Exploded Views/Parts List

NV-SD10 A EA AM
NV-SD20 A EA
NV-SD25AM



NV-SD10A/EA/AM



NV-SD20A/EA, NV-SD25AM

Panasonic

SPECIFICATIONS (NV-SD10A/EA/AM)

ITEM	SPECIFICATION	
POWER	SOURCE: 240V AC 50/60Hz (NV-SD10A) 230V AC 50/60Hz (NV-SD10EA) 110~240V AC 50/60Hz (NV-SD10AM)	
	CONSUMPTION: 21 watts	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL	
TV TUNER SYSTEM	NV-SD10A	VHF I: CH0~CH5 VHF III: CH5A~CH11 (PAL B) UHF: CH21~CH69 (PAL G) 75Ω unbalanced
	NV-SD10EA	VHF I: CH1~CH3 VHF III: CH4~CH11 (PAL B) UHF: CH21~CH69 (PAL G) 75Ω unbalanced
	NV-SD10AM	VHF I: CH1~CH5 VHF III: CH6~CH12 (PAL D/SECAM D, K1) VHF I: CH2~CH4 VHF III: CH5~CH12 (PAL B) UHF: CH13~CH57 (PAL D) UHF: CH21~CH69 (PAL G/SECAM K) 75Ω unbalanced
RF OUT SYSTEM	NV-SD10A	VHF: CH 0/1 (PAL B) 76±3dBμ, 75Ω terminated
	NV-SD10EA	VHF: CH2/3 (PAL B) 76±3dBμ, 75Ω terminated
	NV-SD10AM	VHF: CH3/4 (PAL B) 76±3dBμ, 75Ω terminated

ITEM	SPECIFICATION
VIDEO	HEADS: 3 rotary heads 1 pair for recording and playback (L-R heads) 1 pc. for trick play (L′ heads)
	INPUT: VIDEO IN Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
	OUTPUT: VIDEO OUT Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: AUDIO IN Connector (Phono type) More than −10dBV (316mV), More than 50kΩ
	OUTPUT: AUDIO OUT Connector (Phono type) −6dBV (500mV), Less than 1kΩ
TAPE SPEED	23.39mm/s (PAL) 33.35mm/s (NTSC: NV-SD10AM) Record/Playback Time: 4 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
DIMENSIONS	380(W)×89(H)×356(D) mm
WEIGHT	4.5kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet (NV-SD10A/EA) 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller 1 pc. AC Plug Adaptor (NV-SD10AM) 1 pc. Separate Transformer Adaptor (NV-SD10AM)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

SPECIFICATIONS (NV-SD20A/EA, NV-SD25AM)

ITEM	SPECIFICATION	
POWER	SOURCE: 240V AC 50/60Hz (NV-SD20A) 230V AC 50/60Hz (NV-SD20EA) 110~240V AC 50/60Hz (NV-SD25AM)	
	CONSUMPTION: 21 watts	
RECORDING SYSTEM	2 rotary heads, helical scanning system	
	PAL/NTSC: NV-SD25AM	
TV TUNER SYSTEM	NV-SD20A	VHF I: CH0~CH5 VHF III: CH5A~CH11 (PAL B) UHF: CH21~CH69 (PAL G) 75Ω unbalanced
	NV-SD20EA	VHF I: CH1~CH3 VHF III: CH4~CH11 (PAL B) UHF: CH21~CH69 (PAL G) 75Ω unbalanced
	NV-SD25AM	VHF I: CH1~CH5 VHF III: CH6~CH12 (PAL D/SECAM D, K1) VHF I: CH2~CH4 VHF III: CH5~CH12 (PAL B) VHF I: CH2~CH6 VHF III: CH7~CH13 (NTSC M) UHF: CH13~CH56 (PAL D) UHF: CH21~CH69 (PAL G, I/SECAM K) UHF: CH14~CH69 (NTSC M) 75Ω unbalanced
RF OUT SYSTEM	NV-SD20A	VHF: CH 0/1 (PAL B) 76±3dBμ, 75Ω terminated
	NV-SD20EA	VHF: CH2/3 (PAL B) 76±3dBμ, 75Ω terminated
	NV-SD25AM	UHF: CH38$^{+2}_{-4}$ (PAL G, I/SECAM K) CH25$^{+2}_{-1}$ (PAL D) 73±3dBμ, 75Ω terminated

ITEM	SPECIFICATION
VIDEO	HEADS: 4 rotary heads 1 pair for recording and playback (L-R heads) 1 pair for trick play (L′-R′ heads)
	INPUT: VIDEO IN Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
	OUTPUT: VIDEO OUT Connector (Phono type) 1.0Vp-p, 75Ω unbalanced
AUDIO	HEAD: 1 Stationary head (Normal Audio)
	INPUT: AUDIO IN Connector (Phono type) More than −10dBV (316mV), More than 50kΩ MICROPHONE JACK −70dBV
	OUTPUT: AUDIO OUT Connector (Phono type) −6dBV (500mV), Less than 1kΩ
TAPE SPEED	SP: 23.39mm/s (PAL) 33.35mm/s (NTSC) LP: 11.695mm/s (PAL) 11.12mm/s (NTSC) Record/Playback Time: SP: 4 hours with 240min. type tape LP: 8 hours with 240min. type tape FF/REW Time: 2.5min. with 180min. type tape
DIMENSIONS	380(W)×89(H)×357(D) mm
WEIGHT	4.5kg
STANDARD ACCESSORIES	1 pc. DIN-RF Cable 1 pc. Programme Sheet (NV-SD20A/EA) 1 pc. AC Mains Lead 1 pc. Infra-res Remote Controller 1 pc. AC Plug Adaptor (NV-SD25AM) 1 pc. Separate Transformer Adaptor (NV-SD25AM)

Weight and dimensions shown are approximate.
Specifications are subject to change without notice.

INTRODUCTION

This service manual contains technical information which will allow service personnels to understand and service this model.
Section 1 presents you with some general information of features and controls, enabling you to become familiar with each function.
Section 2 contributes to your mechanical and electrical adjustment as well disassembly and replacement procedures.
In the case of very common information relating to other models like mechanical adjustments, please refer to each service manual.
Section 3, 4 contains block diagrams which offers you information for checking and understanding each circuit. Schematic diagrams which give you detailed information such as waveforms, voltage data, function e.t.c...
Section 5 contains exploded views and parts list.
Please place orders using the parts list and not the drawing reference numbers.
If the circuit is changed or modified, this information will be followed by supplementary service manual to be filed with original service manual.

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SERVICE INFORMATION

1-1. HOW TO CHECK THE CRACKED CHIP PART

(1) Apply heat to the soldered portions of chip part using a soldering iron for about 2–3 seconds.

(2) If the chip part is faulty,it will be broken or cracked.

Caution: Do not leave soldering iron on the PCB too long as damage may occur to the PCB or the chip parts.

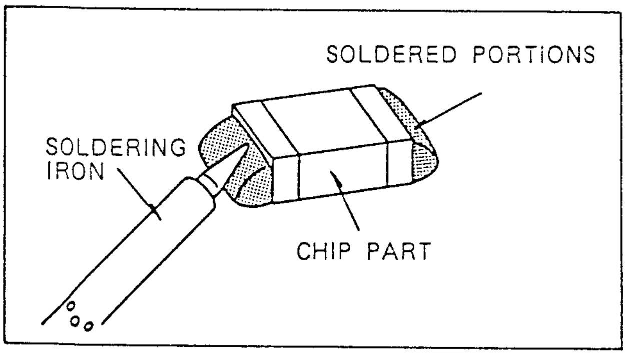

SOLDERED PORTIONS
SOLDERING IRON
CHIP PART

FIG. G1

Note: Regarding intermittent faults
The main causes of these faults are poor soldering and cracked chip parts.

1-2. HOW TO REPLACE THE CHIP PART

1) REMOVAL (RESISTOR, CAPACITOR, etc...)

(1) Presolder the one side of soldering portion for chip part and grasp the chip part by tweezers.

(2) Melt the presoldered portion. And then remove the chip part with a twisting motion while melting the soldering portion of another side quickly.

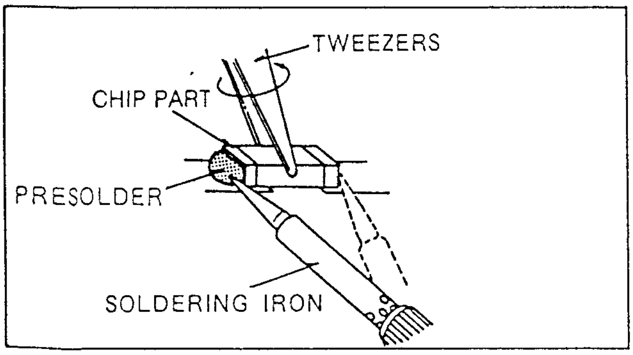

TWEEZERS
CHIP PART
PRESOLDER
SOLDERING IRON

FIG. G2

2) REMOVAL (transistor, diode, etc...)

(1) Grasp the chip part with tweezers and melt the solder of one lead.

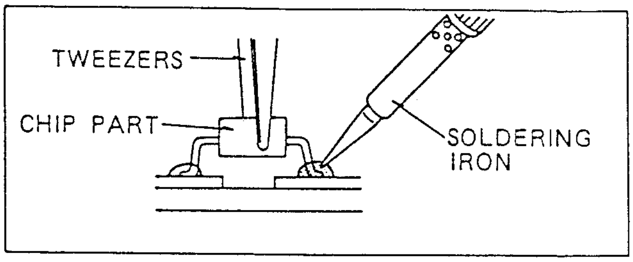

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G3

(2) Lift the side of that lead upward.

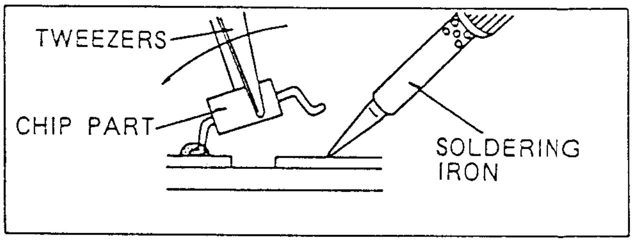

TWEEZERS
CHIP PART
SOLDERING IRON

FIG. G4

Caution: Do not lift the chip part too high as damage may occur to the PCB or the leads that are still soldered on the PCB.

(3) Simultaneously heat the solder of the two remaining leads and lift part to remove.

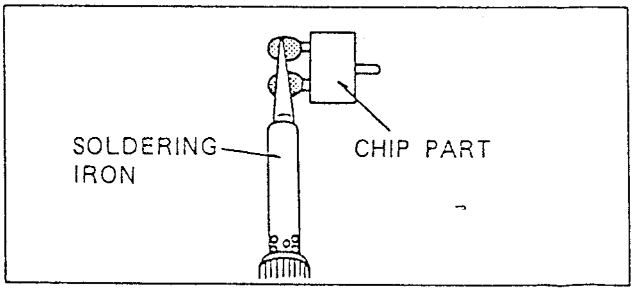

SOLDERING IRON
CHIP PART

FIG. G5

3) INSTALLATION

(1) Presolder the one side of contact point on the circuit board.

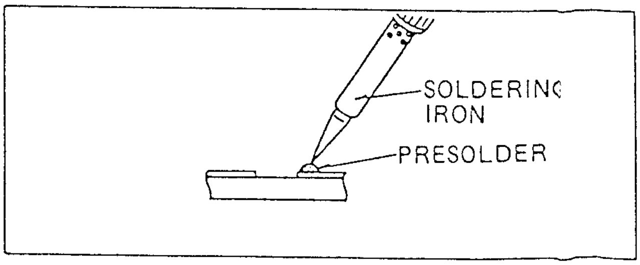

SOLDERING IRON
PRESOLDER

FIG. G6

(2) To install the chip part,hold in position using tweezers, apply heat to the pre-soldered portions using a fine tip soldering iron.
(3) Solder the other side of the chip part.
(4) Check your soldering.

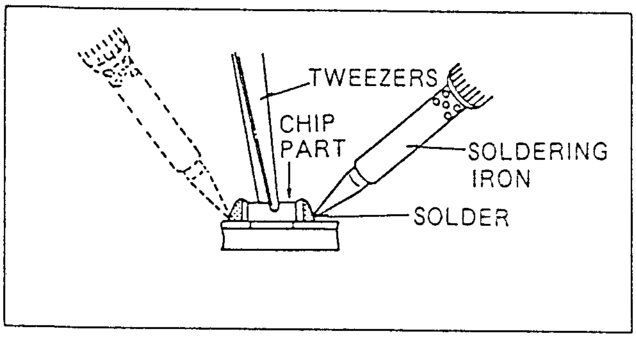

TWEEZERS
CHIP PART
SOLDERING IRON
SOLDER

FIG. G7

1-3. HOW TO REMOVE THE FLAT-IC

(WITH HOT-AIR FLAT-IC DESOLDERING MACHINE)

(FOR EXAMPLE)

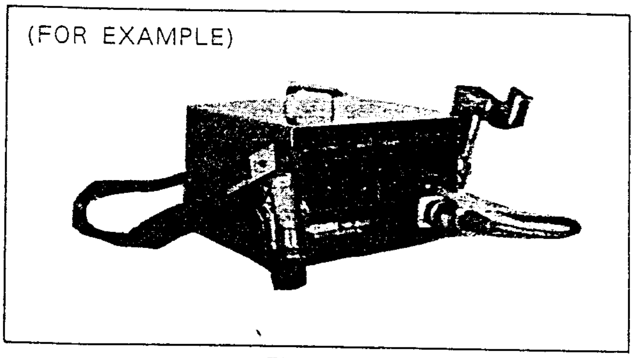


FIG. G8

(1) Prepare the HOT-AIR FLAT-IC DESOLDERING MACHINE. And then apply hot air to FLAT-IC about 5 ~ 8 seconds.

(2) Remove the FLAT-IC with tweezers while applying the hot air.

Caution: Do not supply the hot air to the chip parts around the Flat-IC for long time as as damage may occur to the chip parts around, the Flat -IC.

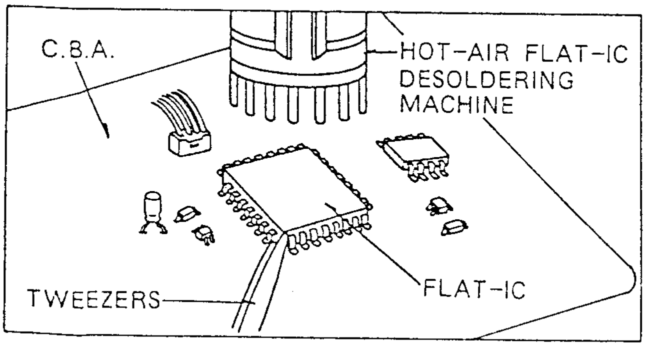

C.B.A.
HOT-AIR FLAT-IC DESOLDERING MACHINE
TWEEZERS
FLAT-IC

FIG. G9

(WITH SOLDERING IRON)

(1) Using solder braid remove the solder from all pins of the Flat-IC.
When you use the solder flux which is applied to all pins of the Flat-IC,you can remove it easily.

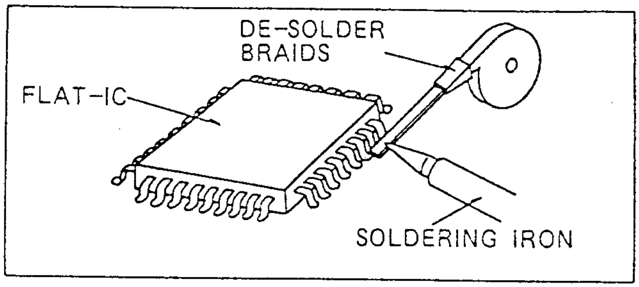

DE-SOLDER BRAIDS
FLAT-IC
SOLDERING IRON

FIG. G10

(2) Lift each lead of the Flat-IC upward one by one using a sharp pin or non solder wire(iron wire),while heating the pins using a fine tip soldering iron or a hot air blower.

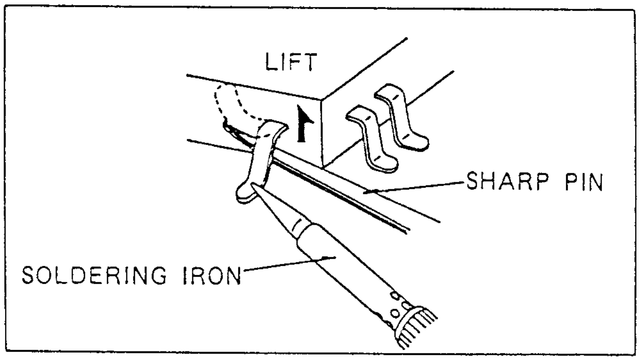

LIFT
SHARP PIN
SOLDERING IRON

FIG. G11

(WITH IRON WIRE)

(1) Affix the wire to workbench or solid mounting point as shown in FIG.G12.
(2) Pull up wire as the solder melts so as to lift the IC lead from the PCB contact pad,while heating the pins using a fine tip soldering iron or hot air blower.

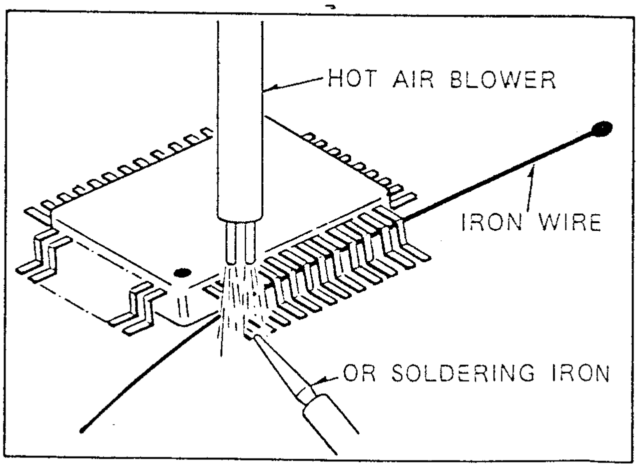

HOT AIR BLOWER
IRON WIRE
OR SOLDERING IRON

FIG.G12

Note: When using a soldering iron care must be taken to ensure that the Flat IC is not being held by glue before it is the PCB may be damaged if force is used.

SECTION 1
GENERAL DESCRIPTIONS

1-1. TECHNICAL INFORMATION

1–1–1. INITIALIZATION OF CHANNEL MEMORY IC (IC7504/M6M80021P)

When replace the channel memory IC (IC7504/M6M80021P), the memory IC should be initialized to keep formal specification.

Note:
1) It should be performed before tuner
2) During initialization or after initialization within 1 second, do not stop the power source. (Do not disconnect AC cord.)
3) Meaning of "INITIALIZATION" is to erase the "SKIP CH" In another to say the number of POSITION CH and DISPLAY CH to be same.

Method:
1) Press the CH UP/DOWN Button so that the Channel indicator indicates "3".
2) Connect a jumper wire between Pin 54 and Pin 35 of IC7501 more than 1 second.
3) Channel indication changes from "3" to "1".

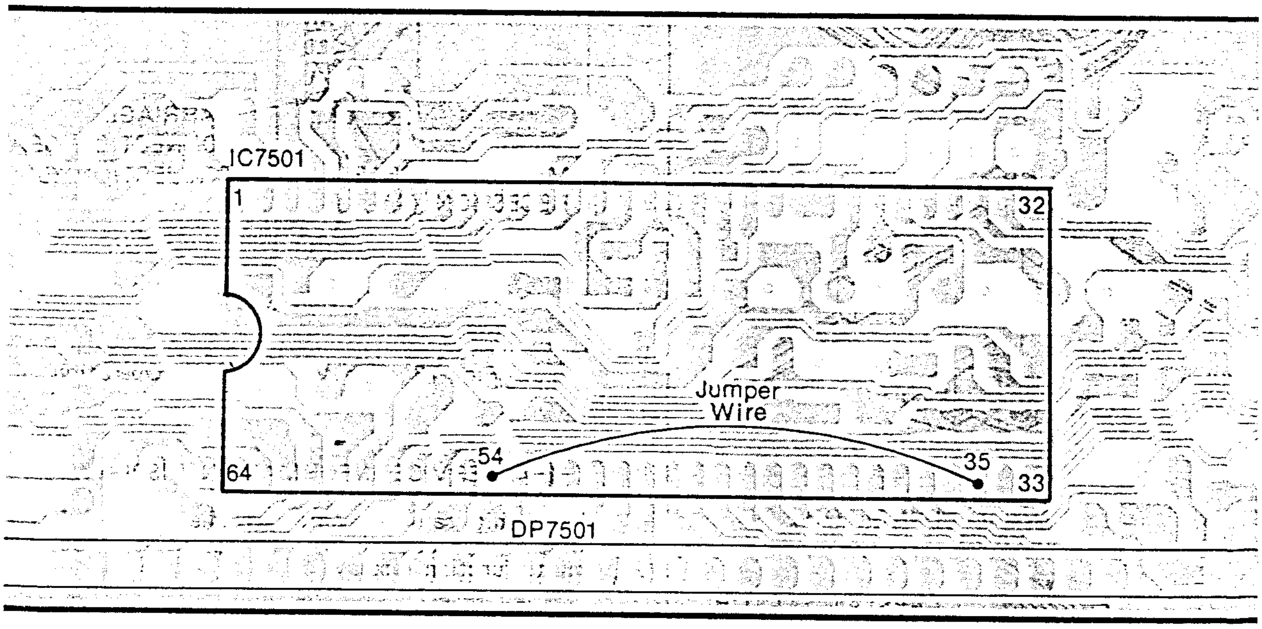


Fig. T1

1-1-2. ASSEMBLY OF CAPSTAN STATOR UNIT

When replacing the CAPSTAN STATOR UNIT, the CENTRE FIXING TOOL(VFK0851) must be used to fix the centre of CAPSTAN STATOR UNIT.

Method:
1) Place the CAPSTAN STATOR UNIT into position.
2) Loosely tighten the 3 screws.
3) Insert the CENTRE FIXING TOOL(VFK0851) as shown in Fig.T2.
4) Tighten the 3 screws.

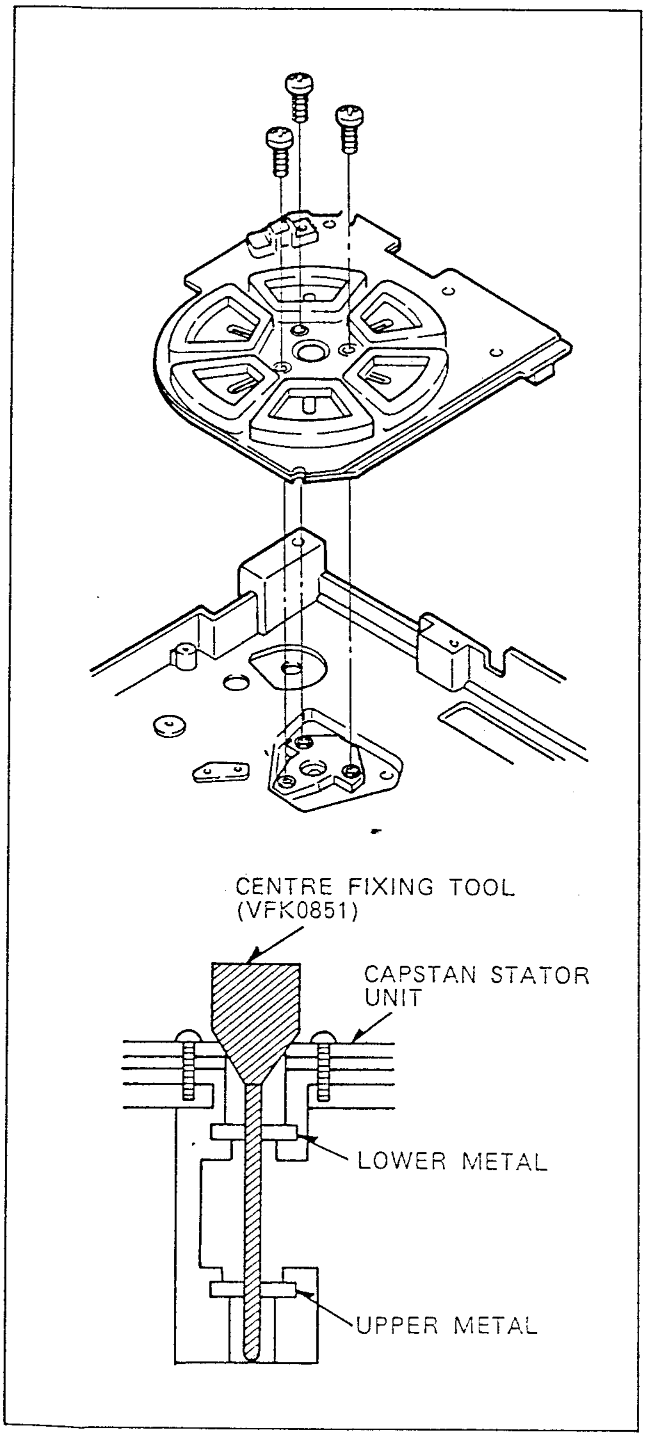

CENTRE FIXING TOOL
(VFK0851)
CAPSTAN STATOR UNIT
LOWER METAL
UPPER METAL

Fig. T2

1-1-3. EJECT OPERATION

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate.
For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

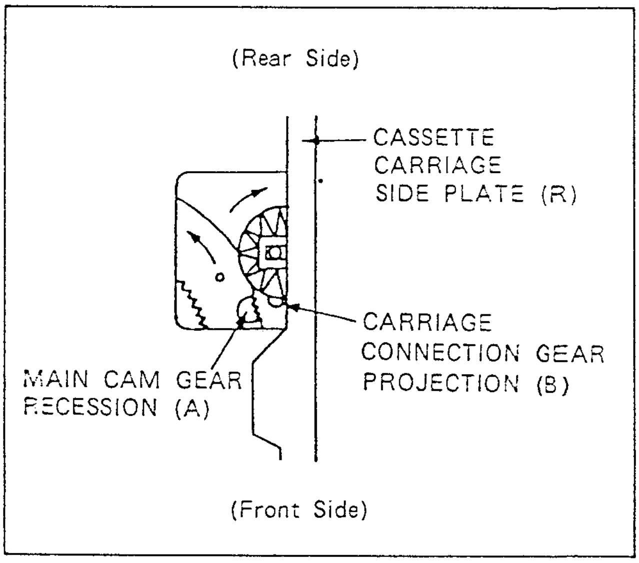

(Rear Side)
CASSETTE CARRIAGE SIDE PLATE (R)
CARRIAGE CONNECTION GEAR PROJECTION (B)
MAIN CAM GEAR RECESSION (A)
(Front Side)

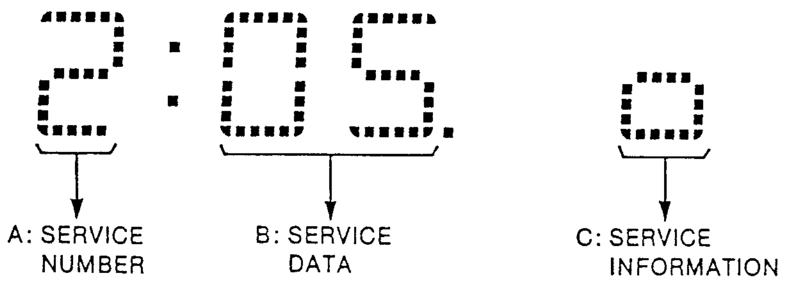
Fig. T3 Top View of Eject Operation

1-1-4. SERVICE INFORMATION DISPLAY

This unit can be confirmed the mode information which is detected by microprocessor IC6001 via multi function display.

Method:
1) Press the "EJECT" button while turning the "SHUTTLE RING" clockwise.
2) The counter of multi function display indicates microprocessor data approximately 1 minutes as shown in Fig.T4.

Note:
1) This mode can be entered even when Power off.
2) Also it can be displayed the data when connect jumper wire between TP6001 and TPGND. (Press the "EJECT" button while turning the "SHUTTLE RING" clockwise, increment service number)



A: SERVICE NUMBER	B: SERVICE DATA	CONTENTS	REMARKS
1	*0	can not detect Take-up and Supply Photo	
	*1	detect Take-up Photo	
	*2	detect Supply Photo	
	*3	detect Take-up and Supply Photo	
2	00	EJECT	
	01	CASSETTE DOWN	
	02	REVIEW	
	04	PLAY/STOP/CUE	
	06	FF/REW	
	07	During moving of each mode	
5	8*	CAPSTAN MOTOR ON	In case of the indication (8/9/U/A/-/┌┐/L) or no indication, CAP MOTOR is turned on.
	*7	CAPSTAN MOTOR ROTATING DIRECTION	In case of the indication (0/1/2/3/4/5/6/7), CAP MOTOR is rotated in forward direction.
	*8	CAPSTAN MOTOR ROTATING DIRECTION	In case of the indication (8/9/U/A/-/┌┐/L) or no indication, CAP MOTOR is rotated in REVERS direction.
6	1*		In case of the indication (1/3/5/7/9/A/┌┐) or no indication, CYL MOTOR is turned on.

NOTE: "*"; No meaning

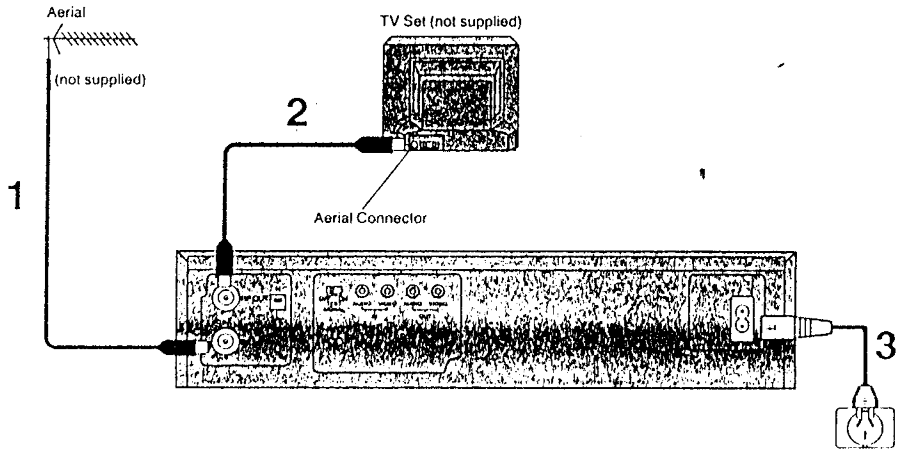
C: SERVICE INFORMATION
0: Normal
1: Cylinder lock (STOP)
2: Reel lock (STOP)
3: Mechanism lock during moving next position except NO. 4 or NO. 6 of service information. (In this case, loading motor can be expected to break down.)
4: Mechanism lock during unloading
5: Less pulse of reels during unloading (In this case, capstan can be expected to break down.)
6: Mechanism lock during front loading (Cassette IN)
7: Serial data (IC6001—IC7501) can not be transmitted.

Fig. T4

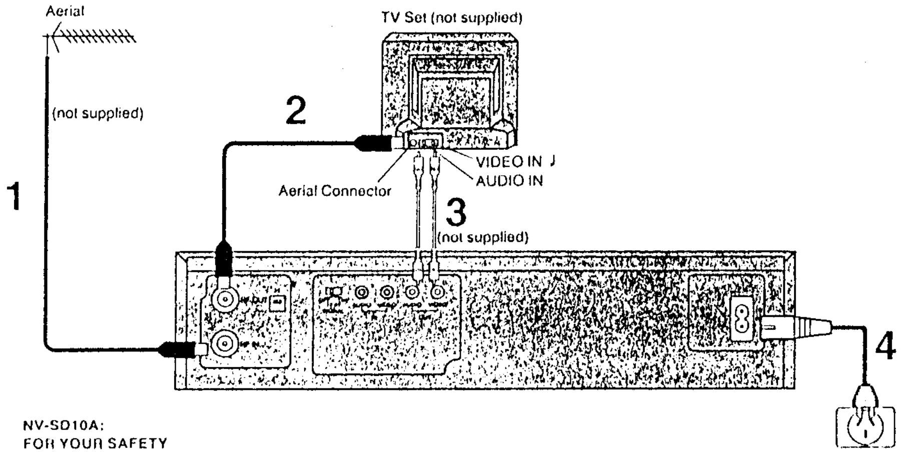
Connections

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

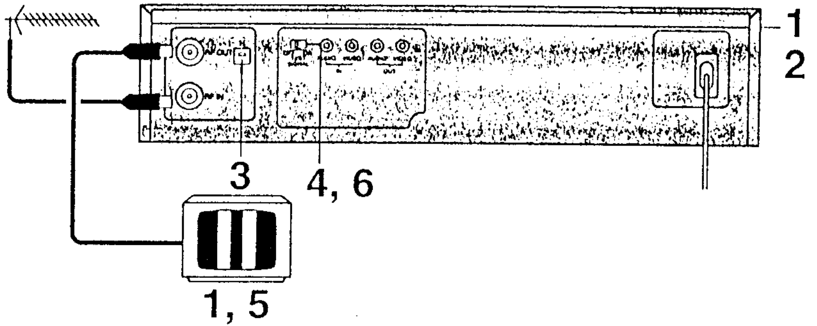

Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
3

Connection to a TV Set with the Audio/Video Input Sockets


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
VIDEO IN
AUDIO IN
3
(not supplied)
4

NV-SD10A:
FOR YOUR SAFETY
Install any external aerial to AS 1417.1.

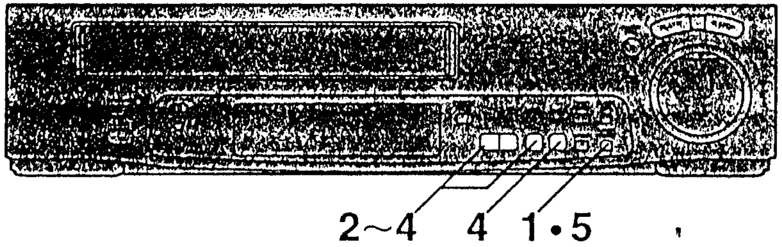
Tuning the TV to your VTR



It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

Operations		Display Symbols	
1	OPERATE		Turn on the TV and VTR.
2	VTR/TV ○	VTR	Select the VTR mode.
3	H L		Select the video playback channel which is not occupied with any TV station. NV-SD10A: L (channel 0) or H (channel 1) NV-SD10EA: L (channel 2) or H (channel 3)
4	OFF ON TEST SIGNAL		To generate a test pattern, set **TEST SIGNAL** to ON.
5			Set the TV to an unused position which you wish to use for your video playback. NV-SD10A: L (channel 0) or H (channel 1) NV-SD10EA: L (channel 2) or H (channel 3) •NV-SD10A only In some areas channel 0 may be used by local TV station. In this case switch to channel 1.
6	OFF ON TEST SIGNAL		Set **TEST SIGNAL** to OFF.



Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and press **VTR/TV** to select the VTR mode.

Operations

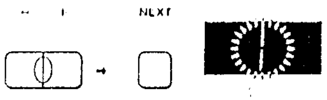
Display Symbols

1

TUNER
PRESET

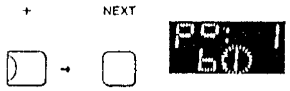
Keep **TUNER PRESET** pressed until a bleep sound is heard.

2



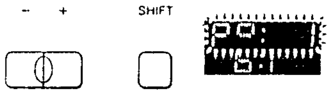
Select the programme position, then press **NEXT**.

3



Select TV band "I", "III" or "U", then press **NEXT**.

4



Search for the required TV station by pressing and holding + or –. Release once the station has been found.

- The station changes quickly by pressing **SHIFT** simultaneously with + or –.

5

TUNER
PRESET

Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.

2 Press **NEXT**.

3 Press + or – to obtain the best tuning condition.
- "AFC" indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

1 Press **TUNER PRESET** until a bleep sound is heard.

2 Select a programme position which you do not want to tune to a TV station, by using + or –.

3 Press **SHIFT**. ("– –" is displayed.)
- Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

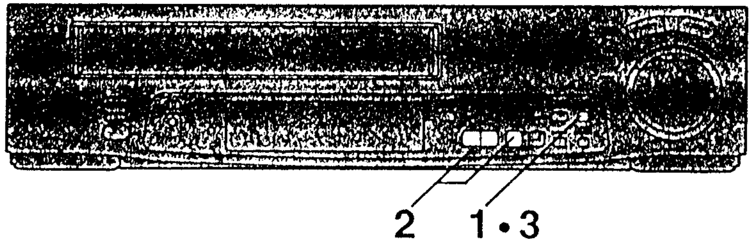
4 Press **TUNER PRESET** twice.

Channel Plan

	VHF		UHF
	I	III	U
NV-SD10A	0-5	5A-11	21-69
NV-SD10EA	1-3	4-11	21-69

PRE-PROGRAMMED TV CHANNELS (NV-SD10A)
The local TV transmission channels 2, 7, 9 and 10 are factory-preset in this VTR. That is, if you can receive television broadcasts on VHF channels 2, 7, 9 and 10, these are already tuned on the programme positions with the matching numbers.
However, it is possible to cancel these presettings and tune the local TV broadcast channels on any desired programme positions.
For alternative settings and tuning of additional TV broadcasts channels, follow the Tuning Operations.

Setting the Clock of the VTR



The built-in digital clock employs the 24-hour system.

Preparation
Turn on the VTR.

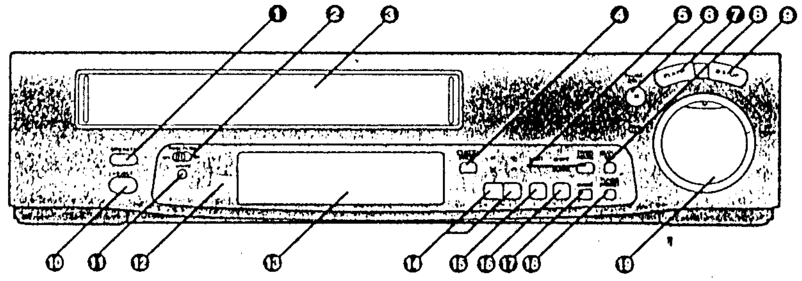
For Example:
Date; 16th, October, 1999
Time; 20:15

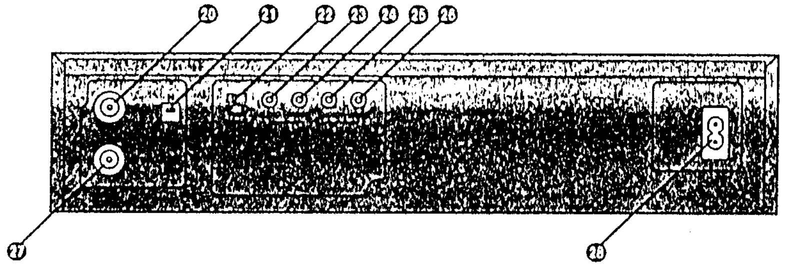
Operations		Display Symbols	
1	CLOCK SET		Keep **CLOCK SET** pressed until a bleep sound is heard.
2	Set each item by pressing + or − and **NEXT**.		
	− +		Set **Year** "99".
			Set **Month** "10".
	↓		Set **Date** "16".
	NEXT		Set **Hour** "20".
			Set **Minute** "15". • There is no need to press **NEXT**.
3	CLOCK SET		Press **CLOCK SET**. • The clock will start.

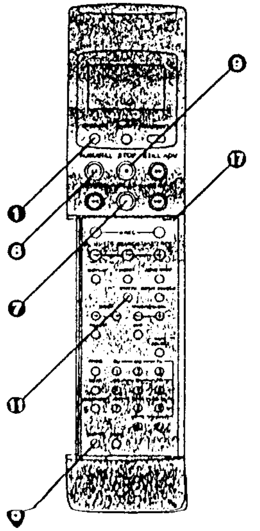
Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time reset function
XX:00.00 can be set by performing the operation steps 1 and 3 during XX:58.00–XX:01.59.

Controls and Connection Sockets







① **OPERATE**
To turn the VTR on and off.

② **NOISE FILTER**
OFF: For normal VTR operation.
ON: For playback of a cassette whose recording quality is inferior.

③ **Cassette Compartment**
Insert a video cassette here.

④ **CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

⑤ **TIMER REC**
To turn the timer recording function on and off.
⊙ is lit or not lit.
The VTR can only be operated manually when the timer recording function is off.

⑥ **PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.

⑦ **PLAY**
To start playback. "▷" is lit.

⑧ **CLOCK SET**
To set the time.

⑨ **STOP**
To stop any playback or recording.

⑩ **EJECT**
To eject a video cassette.

⑪ **VTR/TV**
To select the VTR mode or TV mode.

⑫ **Infra-red Remote Control Receiver Window**

⑬ **Display**

⑭ **∨ ∧/− +**
To select the required programme position (TV station).
To set the clock and timer recording.

⑮ **NEXT**
To proceed to the next item during setting procedure.

⑯ **SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑰ **REC**
To start a recording.

⑱ **TUNER PRESET**
To initiate TV station settings for the tuner.

⑲ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

⑳ **RF OUT**
To connect to the aerial terminal on a TV set.

㉑ **Video Playback Channel Selector**
To select the video playback channel.

㉒ **TEST SIGNAL**
The test signal is transmitted on channel L or H.

㉓ **AUDIO IN**
To connect an audio cable to a video camera or another video recorder.

㉔ **VIDEO IN**
To connect a video cable to a video camera or another video recorder.

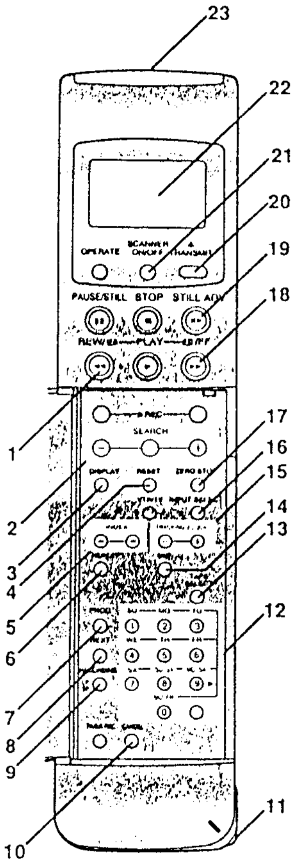
㉕ **AUDIO OUT**
To connect an audio cable to a TV or another video recorder.

㉖ **VIDEO OUT**
To connect a video cable to a TV or another video recorder.

㉗ **RF IN**
To connect to the external aerial.

㉘ **AC IN**
To connect to the main power supply.

Infra-red Remote Controller



1 **REW (REWIND)**
In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"◁◁" is lit.

2 **SEARCH**
To adjust the playback speed backward or forward.

3 **DISPLAY**
To change the indication on the VTR Display.
▸Clock→Counter→Remaining Tape Time ─┘

4 **RESET**
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 **INDEX**
For the Index search function.

6 **REPEAT**
For the repeat playback function.

7 **PROG**
For timer recording by using the remote controller.

8 **NEXT**
To proceed to the next item during setting procedure.

9 **RECORDING SP/LP**
No function.

10 **CANCEL**
To cancel the settings made for a timer recording.

11 **Bar Code Reading Section**
After the Bar Code Reader is turned on, the tip lights in red.

12 **Programme Position Selector Buttons**
- To select the programme positions.

MO-SA
9: ⑨▸
SU MO-SA
19: (-/--) → ① → ⑨▸

- To programme a timer recording.

13 **TAPE SELECT**
To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

14 **SKIP**
To start cue playback in 30 seconds interval during playback.
- Each press gives a 30 seconds time span up to 4 minutes.

15 **TRACKING/V-LOCK**
For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "−" Button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

16 **INPUT SELECT**
To select the "A1" external recording source.

17 **ZERO STOP**
For the zero stop function

18 **FF (FAST FORWARD)**
In the stop mode: To fast forward the tape
In the playback mode:
To search forward.
In the fast forward mode:
To obtain high speed picture.
"▷▷" is lit.

19 **STILL ADV**
To advance a still picture during still playback.

20 **TRANSMIT**
To transmit the data that has been set on the remote controller to the VTR.

21 **SCANNER ON/OFF**
To turn the Bar Code Reader on and off.

22 **Display**

23 **Infra-red Transmitter**
The programming data are transmitted from here to the VTR.

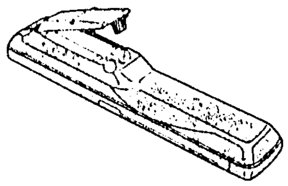
Power source for the remote controller

The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.
- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

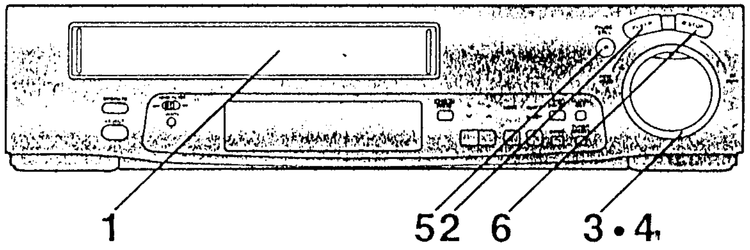
Precautions for battery replacement

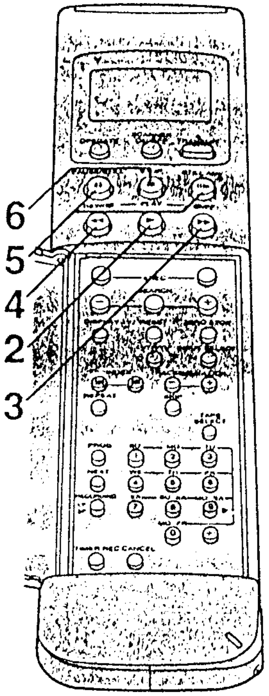
- Load the new batteries with their polarity (+ and −) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Loading the batteries



Playback





Operations	Display Symbols	
1	⊡	Insert a recorded cassette tape. • If it has already been inserted, press **OPERATE** to turn the unit on.
2 PLAY ▷	▷	Start viewing the picture.
3 ⊜/FF ▷▷	▷▷	Search forward by tapping **FF**. • To change back to normal playback, press **PLAY**.
4 REW/⊜ ◁◁	◁◁	Search backward by tapping **REW**. • To change back to normal playback, press **PLAY**.
5 PAUSE/STILL ‖ ↓ STILL ADV	‖	View a still picture. • To advance one frame of the still picture, press **STILL ADV**. • To continue the normal playback, press **PLAY** or **PAUSE/STILL** again.
6 STOP ■		Stop viewing the picture.

Other Playback Functions

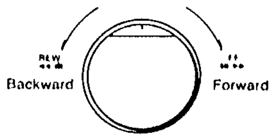
To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL**.

PAUSE/STILL ‖

2 Rotate Shuttle Ring.



Using Remote Controller:

1 Press **SEARCH**.

2 Press + or − repeatedly.

+: To increase the playback speed forward.

−: To increase the playback speed backward.

SEARCH

⊖—○—⊕

To skip scene

Press **SKIP** during playback.

SKIP

○

- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.

⊜/FF ▷▷　REW ◁◁

- The same operation can also be performed by turning the Shuttle Ring.

To return to a specified scene

1 Press **RESET** to set the counter to 0:00.00.

RESET

○

2 Press **STOP** after playback, fast forward or rewind.

3 Press **ZERO STOP**.

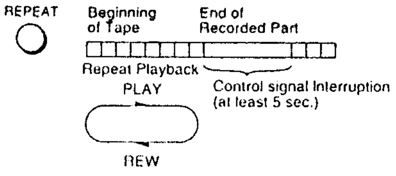
ZERO STOP

○

- The tape will be rewound or fast forwarded to 0:00.00.

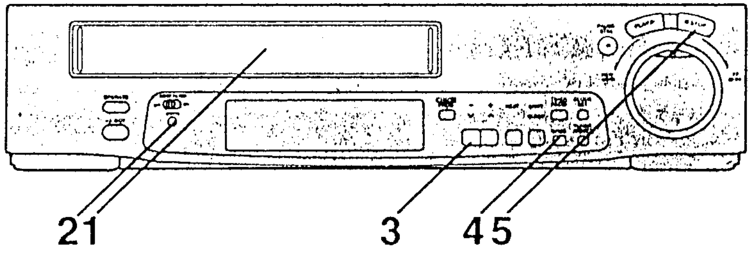
To playback a recorded part repeatedly

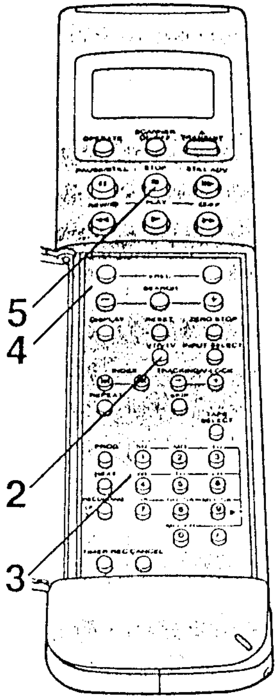
Press **REPEAT** in the stop mode.

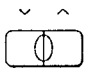
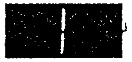


Note:
Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

On-the-spot Recording





	Operations	Display Symbols	
1			Insert a cassette tape. • If it has already been inserted, press **OPERATE** to turn the VTR on.
2	VTR/TV	VTR	Select the VTR mode.
3			Select TV station.
4	●REC		Start recording.
5			Stop recording.

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.

PAUSE
STILL

To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 4.

2 Press **VTR/TV** to select the TV mode.

3 Select the TV programme on your TV set you wish to view at the present time.

To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.

TAPE
SELECT
E195

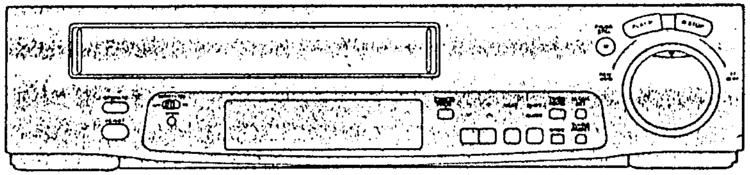
- E195: For E30, -60, -80, -120, -180 and -195 tapes.
  E240: For E240 tape.
  E260: For E260 tape.

2 Press **DISPLAY**.

DISPLAY
1:05

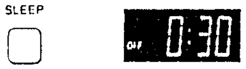
Notes:
- When a video cassette with a broken off tab is inserted, the "▣" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes.

Other Functions



Automatic VTR off time setting

Press **SLEEP** for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0:00.

Other Automatic Functions

Automatic playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**.

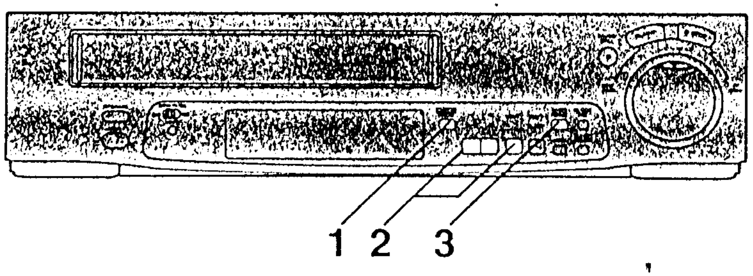
Automatic rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic switching off and ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Timer Recording



Preparation

- Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer Programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30

(present date; 16th October)

Operations **Display Symbols**

1 CHECK PROG

Select **Timer Programme number** "1".

2 Set each item by pressing + or − and NEXT.

− + NEXT

Set **Programme position** (channel) "2".
- For daily and weekly recording, see page 25.

Set **Date** "27".

Set **Starting time** (hour) "20".

Set **Starting time** (minute) "02".

Set **Ending time** (hour) "21".

Set **Ending time** (minute) "30".
- There is no need to press NEXT.

3 TIMER REC

To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press repeatedly until the desired day (days) is displayed.

Daily recording

From Sunday to Saturday

SU MO TU WE
TH FR SA

From Monday to Saturday

MO TU WE
TH FR SA

From Monday to Friday

MO TU WE
TH FR

Weekly recording

For example, Sunday

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the A1 indicator for the programme position.

Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

Cancelling a Timer Programme

1 Release from the standby mode by pressing TIMER REC.

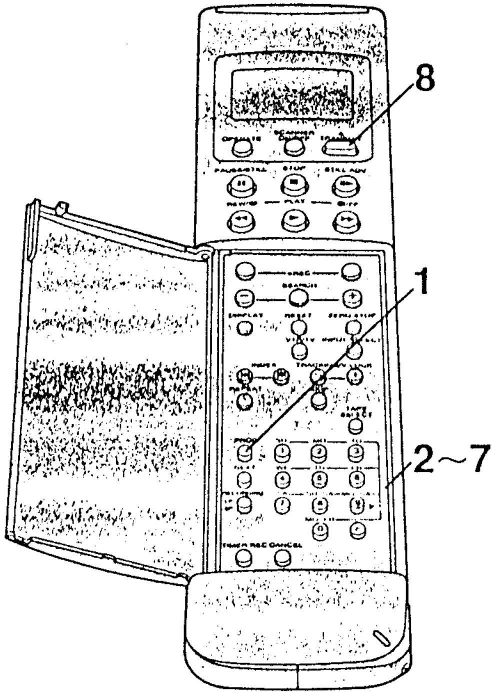
2 Select the timer programme number to be canceled by pressing CHECK/PROG

3 Press + and − simultaneously for more than 3 seconds.

Setting other Programmes in Succession

Repeat steps 1 and 2

Using the Remote Controller



For Example:

Programme position (channel);	27
Date;	3rd. November
Starting time;	20:02
Ending time;	21:30
(Present date; 16th, October)	

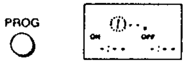
Note:
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

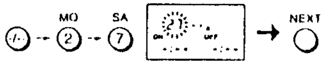
Insert a cassette tape with an intact erasure prevention tab.

Operations

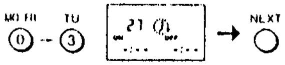
1 Press **PROG.**



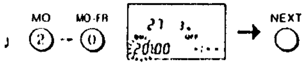
2 Enter **Programme position** "27",
then press NEXT.


-/--
MO 2
SA 7
27
ON
OFF
NEXT

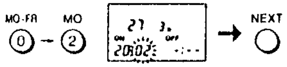
3 Enter **Date** "3",
then press NEXT.


MO-FR 0
TU 3
27 03
ON
OFF
NEXT

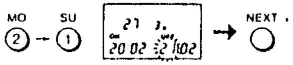
4 Enter **Starting time** (hour) "20",
then press NEXT.


MO 2
MO-FR 0
27 3.
ON
OFF
20:00
NEXT

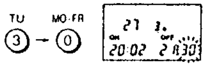
5 Enter **Starting time** (minute) "02",
then press NEXT.


MO-FR 0
MO 2
27 3.
ON
OFF
20:02
NEXT

6 Enter **Ending time** (hour) "21",
then press NEXT.


MO 2
SU 1
27 3.
ON
OFF
20:02 21:02
NEXT

7 Enter **Ending time** (minute) "30".


TU 3
MO-FR 0
27 3.
ON
OFF
20:02 21:30

8 Press **TRANSMIT.**

▲
TRANSMIT

The transmitted data appears on the display and a repeated bleep confirms the reception.

Daily Timer Recording

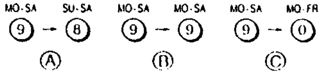
For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Saturday

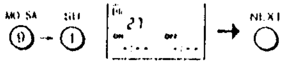
Ⓒ Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.


MO-SA 9
SU-SA 8
MO-SA 9
MO-SA 9
MO-SA 9
MO-FR 0
Ⓐ
Ⓑ
Ⓒ

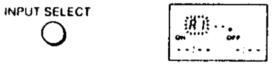
Weekly Timer Recording

Press the 9 button and then the numeric button within 5 seconds in step 3.
For example, SU (Sunday)


MO-SA 9
SU 1
27
ON
OFF
NEXT

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, press **INPUT SELECT** to select the A1 indicator for the programme position.


INPUT SELECT
A1
ON
OFF

Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "[ⓘ]" is lit.
- Make sure that the display of the Remote Controller is not on.

Press TRANSMIT repeatedly until the desired timer programme number is displayed.

▲
TRANSMIT

Cancelling a Timer Programme

1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

▲
TRANSMIT

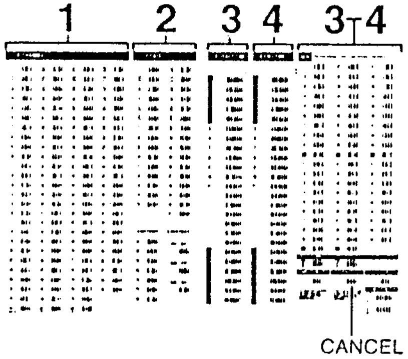
2 Press **CANCEL.**

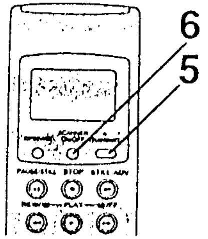
CANCEL

Timer Recording

Setting Timer Recordings from Bar Codes

Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 2 to 4 on the programming sheet.





Preparation

Turn on the VTR and the remote controller.

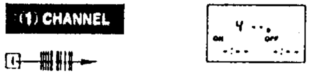
For Example:

Programme position (channel):	4
Date:	3rd, November
Starting time:	20:02
Ending time:	21:30

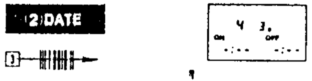
(Present date: 16th, October)

Operations

1 Trace the bar code for **CHANNEL** "4".

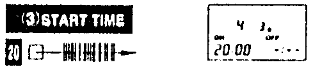


2 Trace the bar code for **DATE** "3".

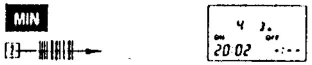


3 Set Starting time.

- Trace the bar code for **START TIME** "20".

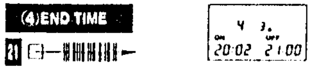


- Trace the bar code for **MIN** "2".



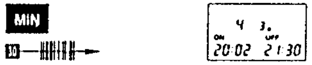
4 Set Ending time.

- Trace the bar code for **END TIME** "21".



The repeated bleep sound indicates readiness for data transmission to the VTR.

- Trace the bar code for **MIN** "30".



The bleep sound will be heard again.

5 To transmit the data to the VTR, press **TRANSMIT** toward the VTR.

- The transmitted data appears on the display of the VTR and a bleep sound confirms proper reception.

Programming a Series Timer Recordings

Trace the CANCEL bar code.

Repeat the required steps 1 to 5 for each timer recording.

6 To turn off the remote controller, press **SCANNER ON/OFF**.

SCANNER ON/OFF

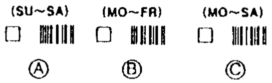
Daily Timer Recording

For this time setting, three day patterns can be selected:

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Friday

Ⓒ Daily recording from Monday to Saturday



Weekly Timer Recording

Trace the bar code for the day of the week in the EVERYWEEK column.
For example, SU (Sunday)

EVERYWEEK
SU
4
ON
OFF

Timer Recording from an External Signal Source

If a timer recording is to be made from a signal source that is connected to the Audio/Video input sockets, the "AV" bar code in the CHANNEL column must be traced for the programme.

Turning the Timer on and off

After programming a timer recording, the timer recording indicator "⏲" lights up, and the VTR can no longer be used for normal recording and playback. To make it possible to use the VTR, trace the TIMER ON/OFF bar code and transmit to the VTR (the timer recording indicator "⏲" will go out). To reactivate the timer again, trace the TIMER ON/OFF bar code again and transmit to the VTR (the "⏲" indicator will light again).

TIMER ON/OFF

Checking a Timer Programme

The VTR must be turned on, or the timer recording indicator "⏲" is lit.

1 Trace the CHECK bar code.
2 Transmit the data to the VTR.
- To check the settings for the next timer recording, press TRANSMIT.

Cancelling a Timer Programme

The data for the timer recording must first be displayed.

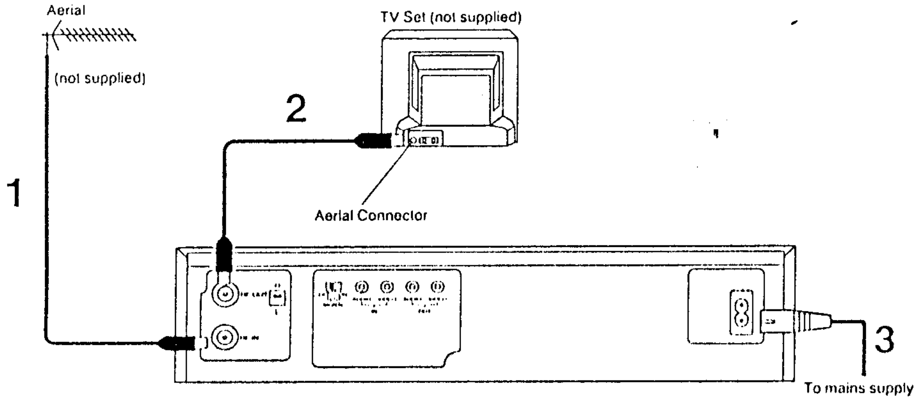
1 Trace the CHECK bar code.
2 Transmit the data to the VTR.
3 Trace the CANCEL bar code.
4 Transmit the data to the VTR.

CANCEL
ON
OFF

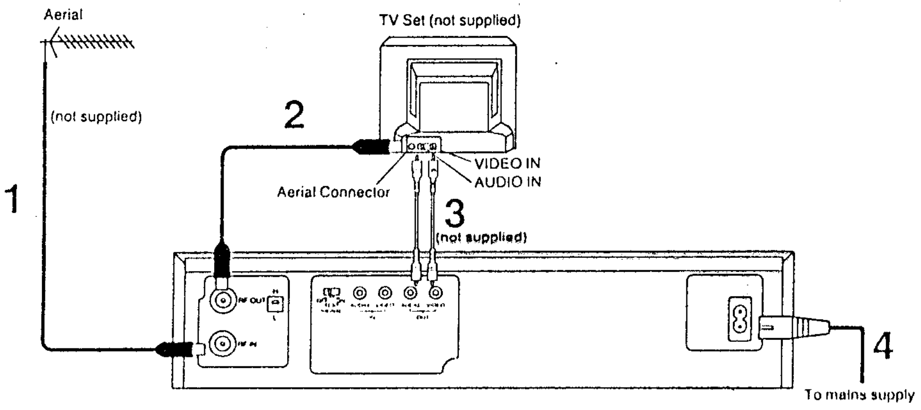
Connections

Basic Connections

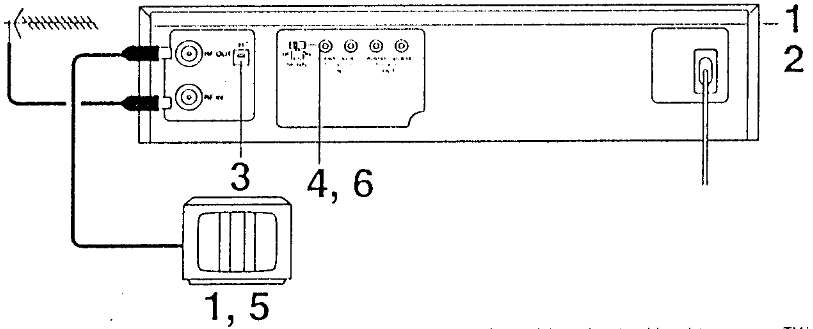
The following connections are required to record and play back the VTR through a TV set:


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
3
To mains supply

Connection to a TV Set with the Audio/Video Input Sockets


Aerial
(not supplied)
TV Set (not supplied)
2
1
VIDEO IN
AUDIO IN
Aerial Connector
3
(not supplied)
4
To mains supply

Tuning the TV into your VTR

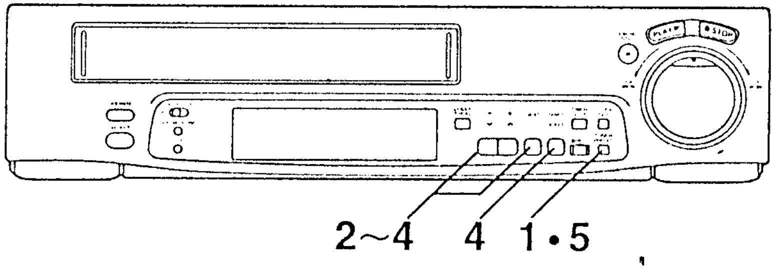


It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

Operations		Display Symbols	
1	OPERATE		Turn on the TV and VTR.
2	VTR/TV	VTR	Select the VTR mode.
3	H L		Select the video playback channel which is not occupied with any TV station. •L (channel 3) or H (channel 4)
4	OFF ON TEST SIGNAL		To generate a test pattern, set TEST SIGNAL to ON.
5			Set the TV to an unused position which you wish to use for your video playback. •VHF channel 3 or 4
6	OFF ON TEST SIGNAL		Set TEST SIGNAL to OFF.

Storing TV Broadcasts into your VTR

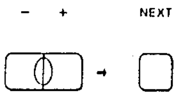
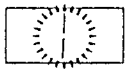
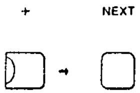
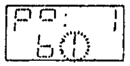
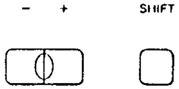
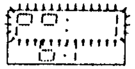


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and press **VTR/TV** to select the VTR mode.
- Select the programme position except A1.

Operations	Display Symbols	
1 TUNER PRESET		Keep **TUNER PRESET** pressed for more than 2 seconds.
2 		Select the programme position, then press **NEXT**.
3 		Select TV band "I", "III" or "U", then press **NEXT**.
4 		Search for the required TV station by pressing and holding + or –. Release once the station has been found. • Search speed changes quickly by pressing **SHIFT** simultaneously with + or –. • To receive a broadcast transmitted in the SECAM format, press **PAL/MESECAM** so that "MESECAM" appears on the display. • Press **NEXT** and repeat steps 2–4 for each programme position you want to tune to a station.
5 TUNER PRESET		Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Press **TUNER PRESET** for more than 2 seconds.

2 Press **NEXT**.

3 Press + or – to obtain the best tuning condition.
- "AFC" indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**.

Blanking of Unoccupied Programme Positions

1 Press **TUNER PRESET** for more than 2 seconds.

2 Select a programme position which you do not want to tune to a TV station, by using + or –.

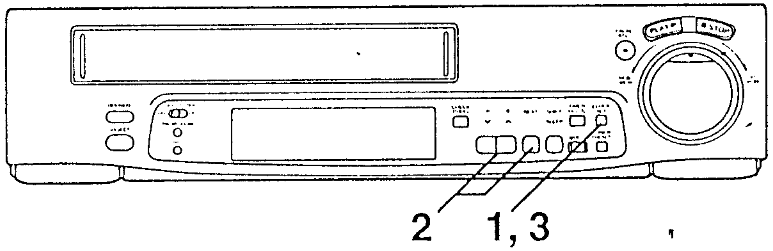
3 Press **SHIFT**. ("– –" is displayed.)
- Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

4 Press **TUNER PRESET** twice.

Channel Plan

VHF		UHF
I	III	U
2–4	5–12	21–69

Setting the Clock of the VTR

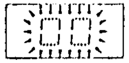
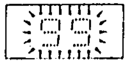
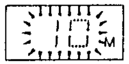
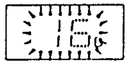
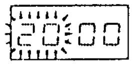
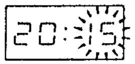
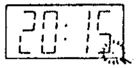


The built-in digital clock employs the 24-hour system.

For Example:
Date: 16th, October, 1999
Time: 20:15

Preparation

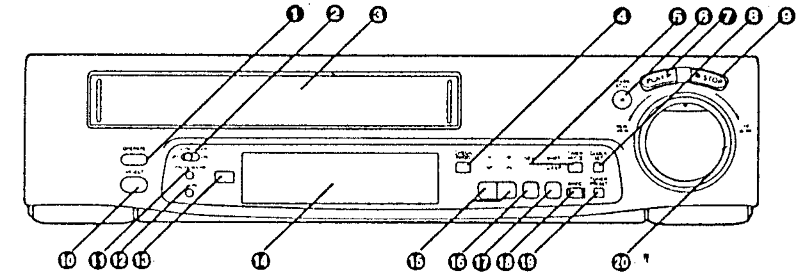
Turn on the VTR.

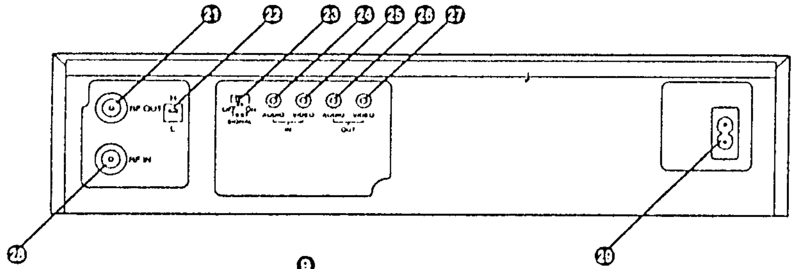
Operations	Display Symbols	
1 CLOCK SET		Keep **CLOCK SET** pressed for more than 2 seconds.
2 Set each item by pressing + or – and NEXT.		
– +		Set Year "99".
		Set Month "10".
↓		Set Date "16".
NEXT		Set Hour "20".
		Set Minute "15". •There is no need to press NEXT.
3 CLOCK SET		Press **CLOCK SET**. •The clock will start.

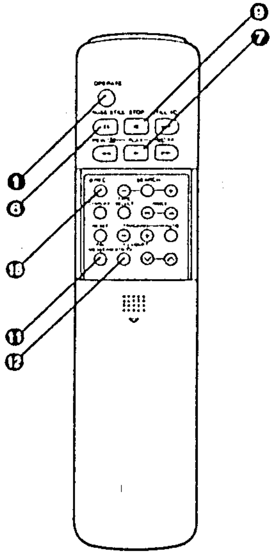
Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time reset function
XX:00.00 can be set by performing the operation steps 1 and 3 during XX:58.00–XX:01.59.

Controls and Connection Sockets







❶ OPERATE
To turn the VTR on and off.

❷ NOISE FILTER
OFF: For normal VTR operation.
ON: For playback of a cassette whose recording quality is inferior.

❸ **Cassette Compartment**
Insert a video cassette here.

❹ CHECK/PROG
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

❺ TIMER REC
To turn the timer recording function on and off.
⏲ is lit or not lit.
The VTR can only be operated manually when the timer recording function is off.

❻ PAUSE/STILL
During playback: Still picture.
During recording: To interrupt recording.

❼ PLAY
To start playback. "▷" is lit.

❽ CLOCK SET
To set the time.

❾ STOP
To stop any playback or recording.

⑩ EJECT
To eject a video cassette.

⑪ PAL/MESECAM
Set according to the colour TV system used during recording and playback.
When the MESECAM indicator is lit, the MESECAM system is selected.

⑫ VTR/TV
To select the VTR mode or TV mode.

⑬ **Infra-red Remote Control Receiver Window**

⑭ **Display**

⑮ ∨ ∧/− +
To select the required programme position (TV station).
To set the clock and timer recording.

⑯ NEXT
To proceed to the next item during setting procedure.

⑰ SLEEP/SHIFT
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑱ REC
To start a recording.

⑲ TUNER PRESET
To initiate TV station settings for the tuner.

⑳ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

㉑ RF OUT
To connect to the aerial terminal on a TV set.

㉒ **Video Playback Channel Selector**
To select the video playback channel.

㉓ TEST SIGNAL
The test signal is transmitted on channel 3 or 4.

㉔ AUDIO IN
To connect an audio cable to a video camera or another video recorder.

㉕ VIDEO IN
To connect a video cable to a video camera or another video recorder.

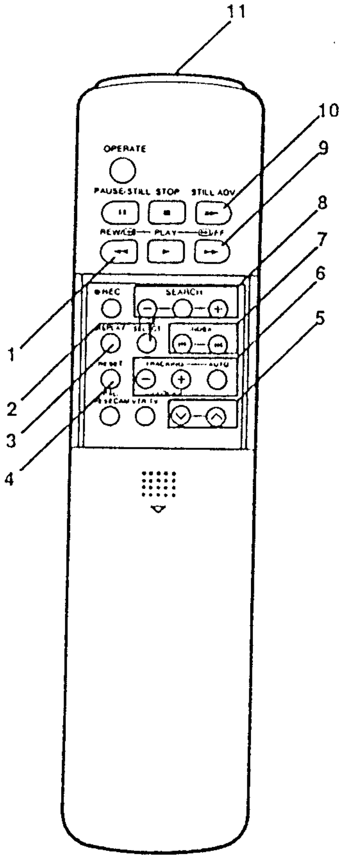
㉖ AUDIO OUT
To connect an audio cable to a TV or another video recorder.

㉗ VIDEO OUT
To connect a video cable to a TV or another video recorder.

㉘ RF IN
To connect to the external aerial.

㉙ AC IN~
To connect to the main power supply.

Infra-red Remote Controller



1 REW (REWIND)
In the stop mode: To rewind the tape.
In the playback mode: To search backward.
In the rewind mode: To obtain high speed picture.
"<]<]" is lit.

2 TAPE SELECT
To set the cassette tape length in order to obtain correct indication of the remaining tape time.
E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

3 DISPLAY
To change the indication on the VTR Display.

→Clock→Counter→Remaining Tape Time

4 RESET
To reset the tape counter (elapsed time) to "0:00.00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 **Programme Position Selector Buttons**
- To select the programme positions.

6 TRACKING/V-LOCK
For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press AUTO to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "−" Button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

7 INDEX
For the index search function.

8 SEARCH
To adjust the playback speed backward or forward.

9 FF (FAST FORWARD)
In the stop mode: To fast forward the tape.
In the playback mode:
To search forward.
In the fast forward mode:
To obtain high speed picture.
"▷▷" is lit.

10 STILL ADV
To advance a still picture during still playback.

11 **Infra-red Transmitter**
The programming data are transmitted from here to the VTR.

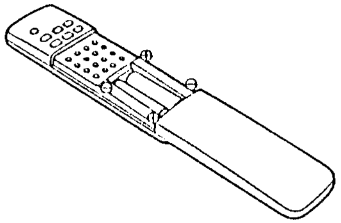
Power source for the remote controller

The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.
- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

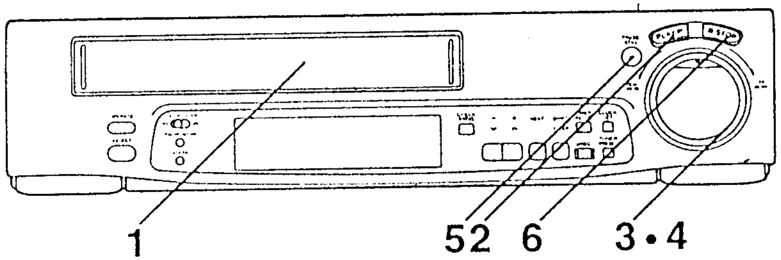
Precautions for battery replacement

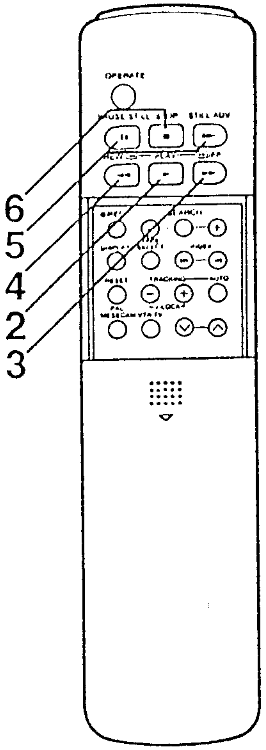
- Load the new batteries with their polarity (+ and −) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

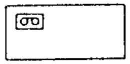
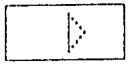
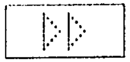
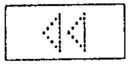
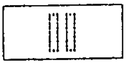
Loading the batteries



Playback





Operations	Display Symbols	
1		Insert a recorded cassette tape.
2 PLAY ►		Start viewing the picture.
3 ⊳⊳/FF ►►		Search forward by tapping FF. • To change back to normal playback, press PLAY.
4 REW/⊲⊲ ◄◄		Search backward by tapping REW. • To change back to normal playback, press PLAY.
5 PAUSE/STILL ❚❚ STILL ADV		View a still picture. • To advance one frame of the still picture, press STILL ADV. • To continue the normal playback, press PLAY or PAUSE/STILL again.
6 STOP ■		Stop viewing the picture.

Other Playback Functions

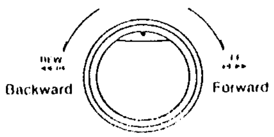
To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Rotate Shuttle Ring.



Using Remote Controller:

1 Press **SEARCH**.

2 Press + or – repeatedly.

+: To increase the playback speed forward.
–: To increase the playback speed backward.

To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.

• The same operation can also be performed by turning the Shuttle Ring.

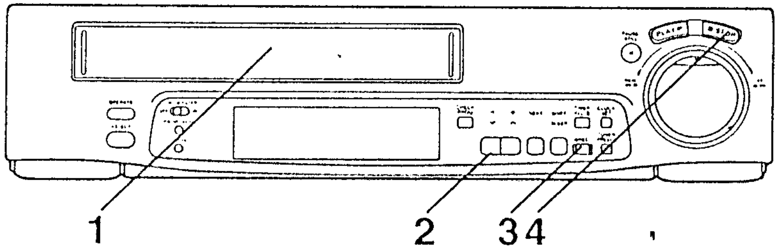
Notes:

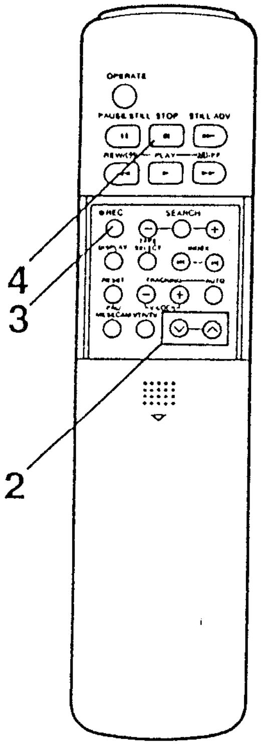
- During Playback, set **PAL/MESECAM.**

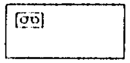
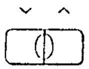
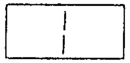
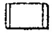
PAL:	When playing back a tape recorded in the PAL system.
MESECAM:	When playing back a tape recorded in the MESECAM system. MESECAM indicator lights up.

- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

On-the-spot Recording




OPERATE
PAUSE/STILL
STOP
STILL ADV
REWIND
PLAY
FF
●REC
SEARCH
PRESET
TRACKING
AUTO
4
3
2

Operations	Display Symbols	
1		Insert a cassette tape. • If it has already been inserted, press **OPERATE** to turn the VTR on.
2 		Select TV station.
3 ●REC 		Start recording.
4		Stop recording.

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.

PAUSE/STILL

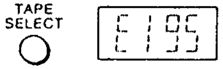
To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 4.

2 Select the TV programme on your TV set you wish to view at the present time.

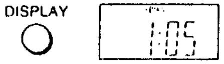
To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.


TAPE SELECT
E195

- E195: For E30, -60, -80, -120, -180 and -195 tapes.
  E240: For E240 tape.
  E260: For E260 tape.

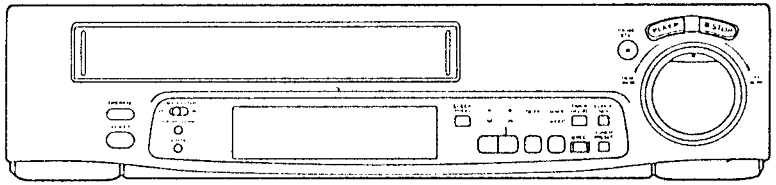
2 Press **DISPLAY**.


DISPLAY
1:05

Notes:

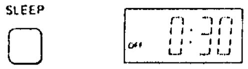
- When a video cassette with a broken off tab is inserted, the "▨" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes.

Other Functions



Automatic VTR off time setting

Press SLEEP for the desired time.



- Each press gives a 30 minutes time span up to 0 hours.
- To cancel the setting time, press SLEEP repeatedly to set 0:00.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR.

Other Automatic Functions

Automatic playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off playback

When the VTR is off, an inserted cassette can be played back by pressing PLAY.

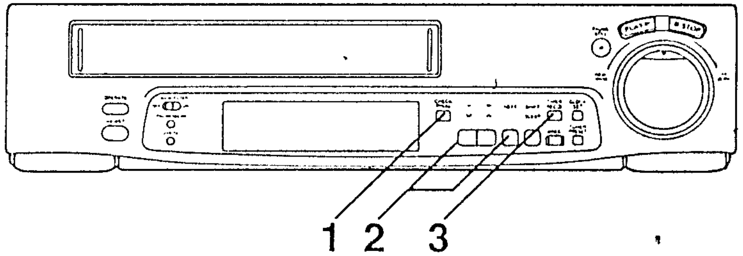
Automatic rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic switching off and ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing EJECT. The VTR will eject the cassette and automatically turn itself off again.

Timer Recording

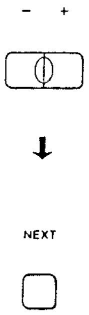
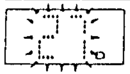
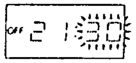


Preparation

- Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer Programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(present date; 16th October)	

Operations		Display Symbols	
1	CHECK PROG		Select Timer Programme number "1".
2	Set each item by pressing + or – and NEXT.		
			Set Programme position (channel) "2".
			Set Date "27". • For daily and weekly recording, see page 25.
			Set Starting time (hour) "20".
			Set Starting time (minute) "02".
			Set Ending time (hour) "21".
			Set Ending time (minute) "30". • There is no need to press NEXT.
3	TIMER REC		To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press – repeatedly until the desired day (days) is displayed.

Daily recording

From Sunday to Saturday	SU MO TU WE TH FR SA
From Monday to Saturday	MO TU WE TH FR SA
From Monday to Friday	MO TU WE TH FR

Weekly recording

For example, Sunday	SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the A1 indicator for the programme position.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

Cancelling a Timer Programme

1 Release from the standby mode by pressing TIMER REC.

2 Select the timer programme number to be canceled by pressing CHECK/PROG.

3 Press + and – simultaneously for more than 3 seconds.

Search Function

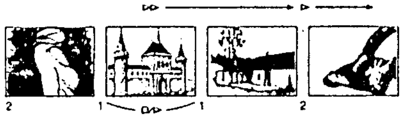
VHS Index Search System

Preparation

Insert a recorded cassette tape with index signals.

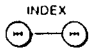
For example:

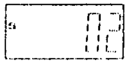
Searching for the 2nd recorded segment in the forward direction.



Operations / Display Symbols

Press INDEX ►►I twice.





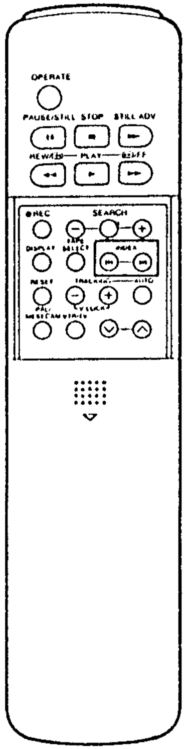
- After finding the specific recorded segment, playback starts automatically.
- For the reverse direction, press INDEX I◄◄.

Recording Index Signals

Index signals are recorded in following cases.
WRITE indicator appears on the Display.

- When a recording is started by pressing REC.
- When REC is pressed during recording.
- When timer recording is activated

Note:
The search function can only work correctly, if the index signals are spaced at least 3 minutes apart.

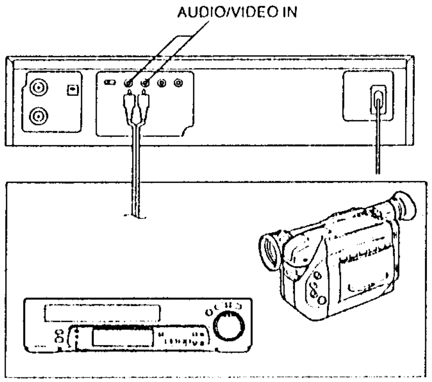


Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

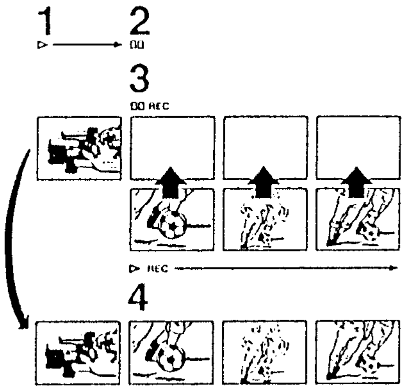
A new scene can be added to the end of a previous one.



Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing ∨ ∧ to set A1.
- Set **PAL/MESECAM.**

PAL:	When receiving PAL signals.
MESECAM:	When receiving SECAM signals. The MESECAM Indicator lights up.



Operations

1 Search for the end of the previous recording.

PLAY

2 Press **PAUSE/STILL** at the end point.

PAUSE STILL

3 Set for the new recording by pressing REC.

●REC

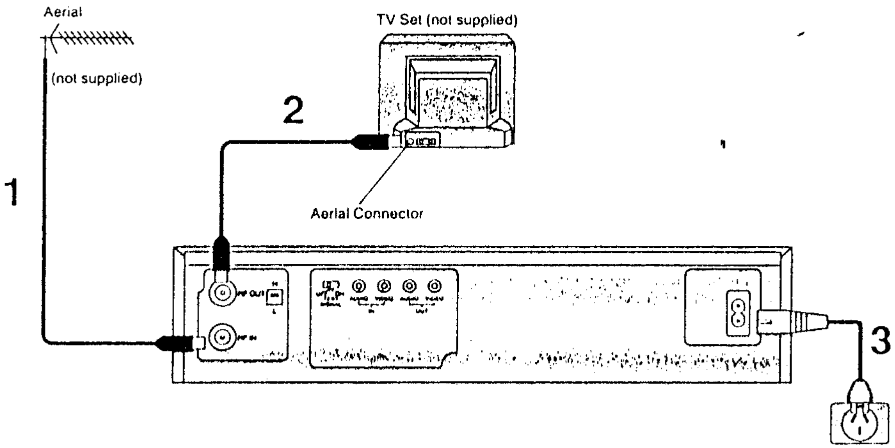
4 Start the new recording by pressing PAUSE/STILL again.

PAUSE STILL

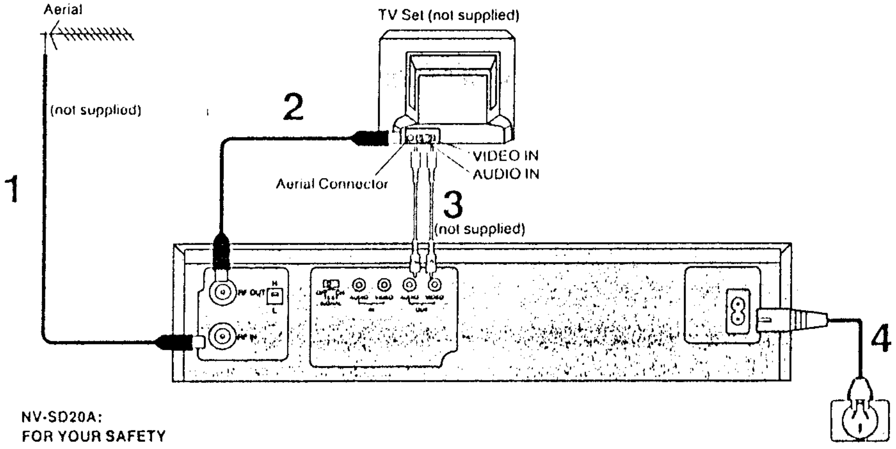
Connections

Basic Connections

The following connections are required to record and play back the VTR through a TV set:

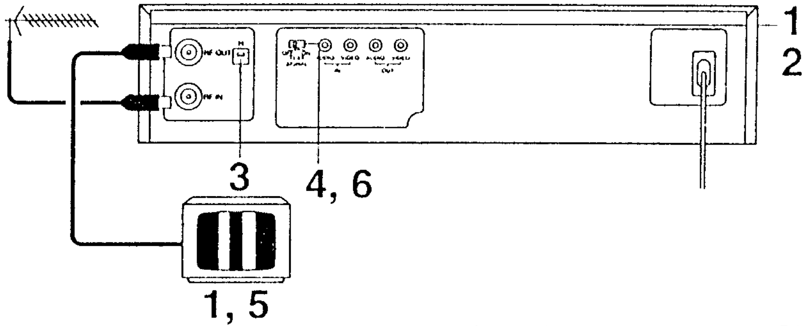

Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
3

Connection to a TV Set with the Audio/Video Input Sockets


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
VIDEO IN
AUDIO IN
3
(not supplied)
4

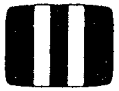
NV-SD20A:
FOR YOUR SAFETY
Install any external aerial to AS 1417.1.

Tuning the TV to your VTR

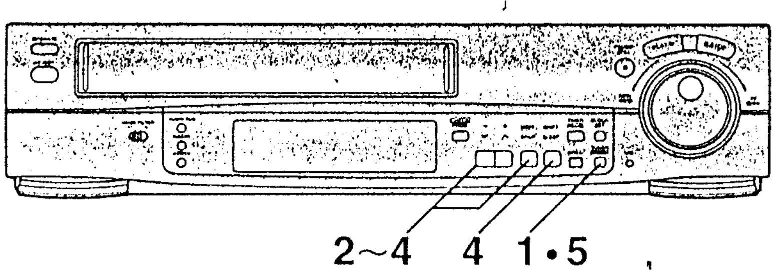


It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

Operations		Display Symbols	
1	OPERATE		Turn on the TV and VTR.
2	VTR/TV	VTR	Select the VTR mode.
3	H L		Select the video playback channel which is not occupied with any TV station. NV-SD20A: L (channel 0) or H (channel 1) NV-SD20EA: L (channel 2) or H (channel 3)
4	OFF ON TEST SIGNAL		To generate a test pattern, set **TEST SIGNAL** to ON.
5			Set the TV to an unused position which you wish to use for your video playback. NV-SD20A: L (channel 0) or H (channel 1) NV-SD20EA: L (channel 2) or H (channel 3) •NV-SD20A only In some areas channel 0 may be used by local TV station. In this case switch to channel 1.
6	OFF ON TEST SIGNAL		Set **TEST SIGNAL** to OFF.

Storing TV Broadcasts into your VTR

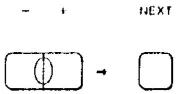
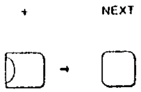
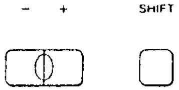


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and press **VTR/TV** to select the VTR mode.
- Select the programme position except A1.

	Operations	Display Symbols	
1	TUNER PRESET		Keep **TUNER PRESET** pressed until a bleep sound is heard.
2			Select the programme position, then press **NEXT**.
3			Select TV band "I", "III" or "U", then press **NEXT**.
4			Search for the required TV station by pressing and holding + or –. Release once the station has been found. •Search speed changes quickly by pressing **SHIFT** simultaneously with + or –. •Press **NEXT** and repeat steps 2–4 for each programme position you want to tune to a station.
5	TUNER PRESET		Press **TUNER PRESET** twice.

Fine Tuning Procedure

1 Press **TUNER PRESET** until a bleep sound is heard, and then press again.

2 Press **NEXT**

3 Press + or – to obtain the best tuning condition.
- "AFC" Indicator disappears.
- To return the tuning to its former state, press **SHIFT**.

4 Press **TUNER PRESET**

Blanking of Unoccupied Programme Positions

1 Press **TUNER PRESET** until a bleep sound is heard.

2 Select a programme position which you do not want to tune to a TV station, by using + or –.

3 Press **SHIFT**. ("– –" is displayed.)
- Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
- To cancel the blanking of a programme position, select that programme position on the VTR and then press **SHIFT**.

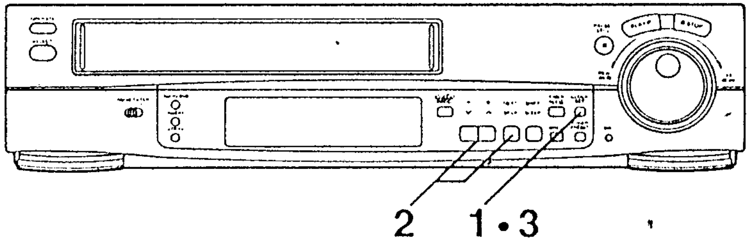
4 Press **TUNER PRESET** twice.

Channel Plan

	VHF		UHF
	I	III	U
NV-SD20A	0-5	5A-11	21-69
NV-SD20EA	1-3	4-11	21-69

PRE-PROGRAMMED TV CHANNELS (NV-SD20A)
The local TV transmission channels 2, 7, 9 and 10 are factory-preset in this VTR. That is, if you can receive television broadcasts on VHF channels 2, 7, 9 and 10, these are already tuned on the programme positions with the matching numbers.
However, it is possible to cancel these presettings and tune the local TV broadcast channels on any desired programme positions.
For alternative settings and tuning of additional TV broadcasts channels, follow the Tuning Operations.

Setting the Clock of the VTR



The built-in digital clock employs the 24-hour system.

Preparation
Turn on the VTR.

For Example:
Date; 16th, October, 1999
Time; 20:15

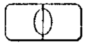
Operations **Display Symbols**

1 CLOCK SET

Keep **CLOCK SET** pressed until a bleep sound is heard.

2 Set each item by pressing + or − and **NEXT**.

Set **Year** "99".



Set **Month** "10".

Set **Date** "16".

NEXT

Set **Hour** "20".

Set **Minute** "15".
- There is no need to press **NEXT**.

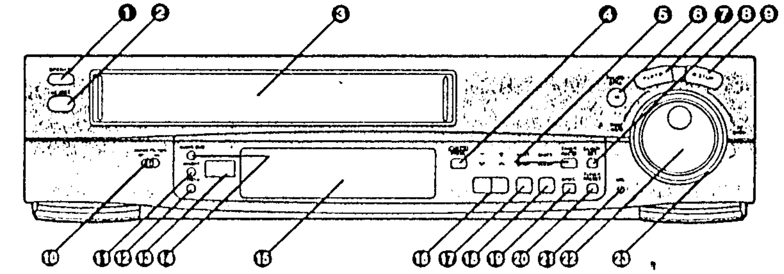
3 CLOCK SET

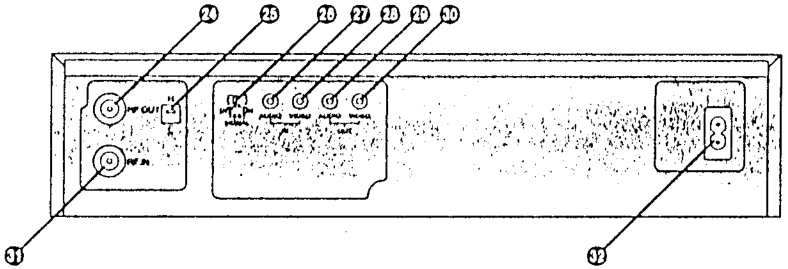
Press **CLOCK SET**.
- The clock will start.

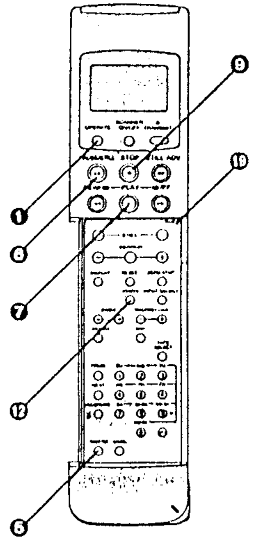
Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time reset function
XX:00:00 can be set by performing the operation steps 1 and 3 during XX:58:00–XX:01:59.

Controls and Connection Sockets







① **OPERATE**
To turn the VTR on and off.

② **EJECT**
To eject a video cassette.

③ **Cassette Compartment**
Insert a video cassette here.

④ **CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

⑤ **TIMER REC**
To turn the timer recording function on and off.
[⏲] is lit or not lit.
The VTR can only be operated manually when the timer recording function is off.

⑥ **PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.

⑦ **PLAY**
To start playback. "▷" is lit.

⑧ **CLOCK SET**
To set the time.

⑨ **STOP**
To stop any playback or recording.

⑩ **NOISE FILTER**
OFF: For normal VTR operation.
ON: For playback of a cassette whose recording quality is inferior.

⑪ **INSERT**
To set up the VTR for insert editing.
INSERT indicator lights up.

⑫ **VTR/TV**
To select the VTR mode or TV mode.

⑬ **Infra-red Remote Control Receiver Window**

⑭ **AUDIO DUB**
To set up the VTR for audio dubbing.
A.DUB indicator lights up.

⑮ **Display**

⑯ **∨ ∧/− +**
To select the required programme position (TV station).
To set the clock and timer recording.

⑰ **NEXT/SP/LP**
To proceed to the next item during setting procedure.
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.

⑱ **SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑲ **REC**
To start a recording.

⑳ **TUNER PRESET**
To initiate TV station settings for the tuner.

㉑ **MIC**
To connect a microphone for recording.

㉒ **Jog Dial**
To locate any desired frame with utmost precision.

㉓ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback, mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

㉔ **RF OUT**
To connect to the aerial terminal on a TV set.

㉕ **Video Playback Channel Selector**
To select the video playback channel.

㉖ **TEST SIGNAL**
The test signal is transmitted on channel L or H.

㉗ **AUDIO IN**
To connect an audio cable to a video camera or another video recorder.

㉘ **VIDEO IN**
To connect a video cable to a video camera or another video recorder.

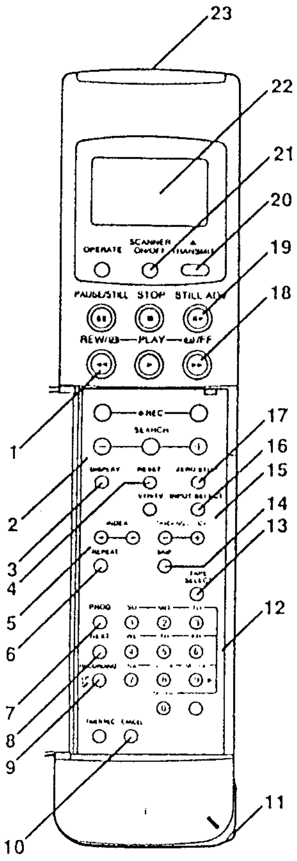
㉙ **AUDIO OUT**
To connect an audio cable to a TV or another video recorder.

㉚ **VIDEO OUT**
To connect a video cable to a TV or another video recorder.

㉛ **RF IN**
To connect to the external aerial.

㉜ **AC IN ~**
To connect to the main power supply.

Infra-red Remote Controller



1 REW (REWIND)

In the stop mode:	To rewind the tape.
In the playback mode:	To search backward.
In the rewind mode:	To obtain high speed picture.

"◄◄" is lit.

2 SEARCH

To adjust the playback speed backward or forward.

3 DISPLAY

To change the indication on the VTR Display.

→Clock → Counter → Remaining Tape Time ─┐

4 RESET

To reset the tape counter (elapsed time) to "0:00.00".

- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 INDEX

For the index search function.

6 REPEAT

For the repeat playback function.

7 PROG

For timer recording by using the remote controller.

8 NEXT

To proceed to the next item during setting procedure.

9 RECORDING SP/LP

To select the tape speed desired for recording.

10 CANCEL

To cancel the settings made for a timer recording.

11 Bar Code Reading Section

After the Bar Code Reader is turned on, the tip lights in red.

12 Programme Position Selector Buttons

- To select the programme positions.

MO SA
9: ⑨▸
SU MO SA
19: (-/--) → ① → ⑨▸

- To programme a timer recording.

13 TAPE SELECT

To set the cassette tape length in order to obtain correct indication of the remaining tape time.

E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

14 SKIP

To start cue playback in 30 seconds interval during playback.

- Each press gives a 30 seconds time span up to 4 minutes.

15 TRACKING/V-LOCK

For manual tracking adjustment
The + and − buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment
When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "−" Button to reduce the noise bars.

For vertical locking adjustment
Use the + and − buttons to minimize any vertical jitter during still-picture playback.

16 INPUT SELECT

To select the "A1" external recording source.

17 ZERO STOP

For the zero stop function.

18 FF (FAST FORWARD)

In the stop mode:	To fast forward the tape.
In the playback mode.	To search forward
In the fast forward mode:	To obtain high speed picture.

"►►" is lit.

19 STILL ADV

To advance a still picture during still playback.

20 TRANSMIT

To transmit the data that has been set on the remote controller to the VTR.

21 SCANNER ON/OFF

To turn the Bar Code Reader on and off.

22 Display

23 Infra-red Transmitter

The programming data are transmitted from here to the VTR.

Power source for the remote controller

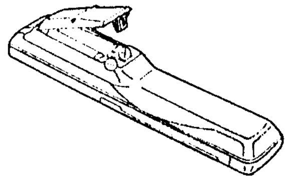
The remote controller is powered by 2 "AA", "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.

- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

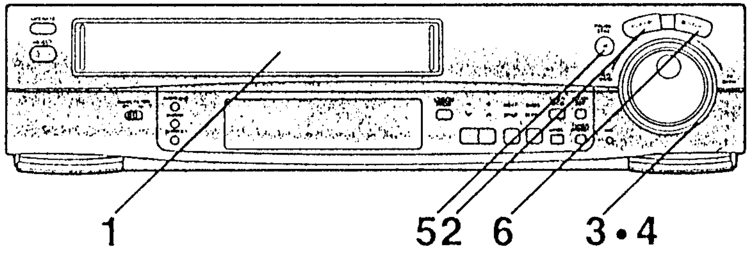
Precautions for battery replacement

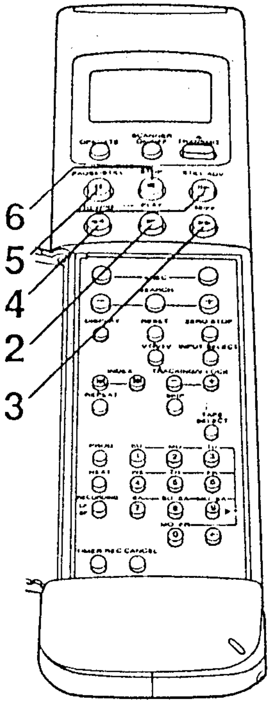
- Load the new batteries with their polarity (+ and −) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

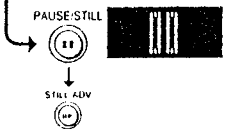
Loading the batteries



Playback





Operations	Display Symbols	
1		Insert a recorded cassette tape.
2	PLAY	Start viewing the picture.
3		Search forward by tapping **FF**. • To change back to normal playback, press **PLAY**.
4	REW/	Search backward by tapping **REW**. • To change back to normal playback, press **PLAY**.
5	 PAUSE/STILL STILL ADV	View a still picture. • To advance one frame of the still picture, press **STILL ADV**. • To continue the normal playback, press **PLAY** or **PAUSE/STILL** again.
6	STOP	Stop viewing the picture.

Other Playback Functions

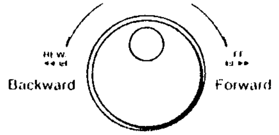
To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Rotate Shuttle Ring.


REW
Backward
FF
Forward

Using Remote Controller:

1 Press **SEARCH**

2 Press + or − repeatedly.

+ : To increase the playback speed forward.

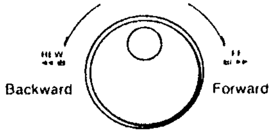
− : To increase the playback speed backward

To locate the desired picture exactly

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Turn Jog Dial.


REW
Backward
FF
Forward

To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.

Keep **REW** pressed during rewind.

- The same operation can also be performed by turning the Shuttle Ring.

To skip scene

Press **SKIP** during playback.

- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To return to a specified scene

1 Press **RESET** to set the counter to 0:00 00.

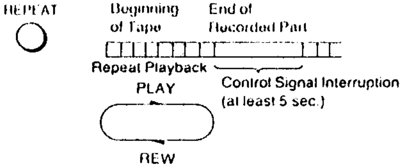
2 Press **STOP** after playback, fast forward or rewind

3 Press **ZERO STOP**.

- The tape will be rewound or fast forwarded to 0.00.00.

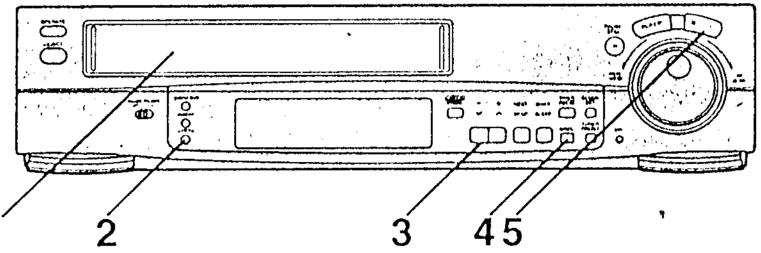
To playback a recorded part repeatedly

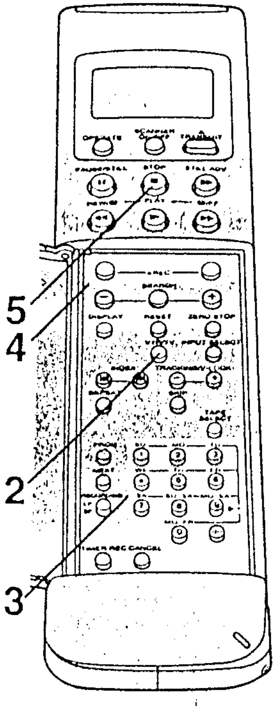
Press **REPEAT** in the stop mode.

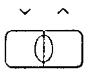

REPEAT
Beginning of Tape
End of Recorded Part
Repeat Playback
Control Signal Interruption (at least 5 sec.)
PLAY
REW

Note:
Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

On-the-spot Recording





	Operations	Display Symbols	
1			Insert a cassette tape. • If it has already been inserted, press **OPERATE** to turn the VTR on.
2	VTR/TV 		Select the VTR mode.
3			Select TV station.
4	●REC 		Start recording.
5			Stop recording.

To select the desired tape speed

Press **SP/LP** before recording.

To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.

PAUSE
STILL

To record one TV programme while viewing another programme

1 Refer to the on-the-spot recording operations steps 1 to 4.

2 Press **VTR/TV** to select the TV mode.

3 Select the TV programme on your TV set you wish to view at the present time.

To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.

TAPE SELECT
E 195

E195:	For E30, -60, -80, -120, -180 and -195 tapes.
E240:	For E240 tape.
E260:	For E260 tape.

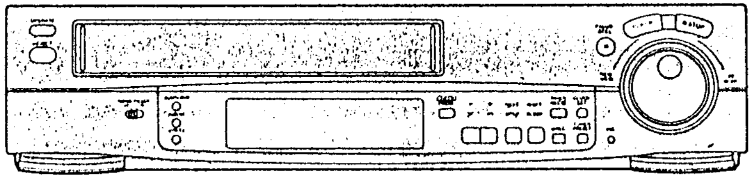
2 Press **DISPLAY**.

DISPLAY
1:05

Notes:

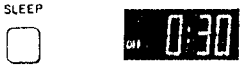
- When a video cassette with a broken off tab is inserted, the "▆" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes.

Other Functions



Automatic VTR off time setting

Press **SLEEP** for the desired time.



- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press **SLEEP** repeatedly to set 0.00.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR via a PAL system TV set.

A note about NTSC playback on PAL TV function

On some TVs, the playback picture may roll up or down; adjust this using the V-HOLD control on the TV. TVs not equipped with a V-HOLD control cannot correct this condition. The playback picture will shrink vertically, and black bars will appear both on the top and bottom of the screen. This is not an indication of a malfunction.

- During Cue, Review, Still or Slow playback, the picture may not be in colour.
- Recording in the NTSC system is not possible with this VTR.
- This function is designed only to allow the playback of tapes recorded by NTSC signals on a PAL system TV. The NTSC signal is not completely converted to a PAL signal. For this reason, images played back by this function cannot be recorded on another VTR.
- When playing back a tape recorded in the NTSC system SLP mode, the "LP" indication will light up in the Display.

Other Automatic Functions

Automatic playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off playback

When the VTR is off, an inserted cassette can be played back by pressing **PLAY**

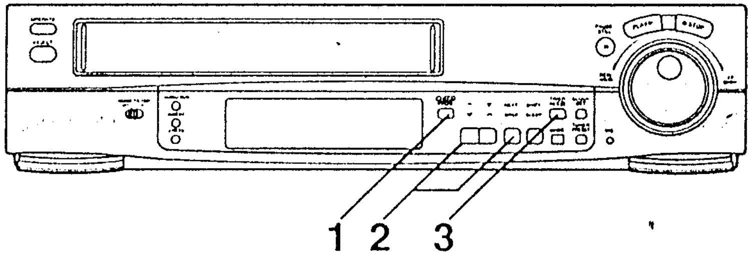
Automatic rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic switching off and ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing **EJECT**. The VTR will eject the cassette and automatically turn itself off again.

Timer Recording



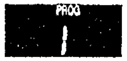
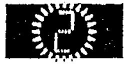
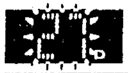
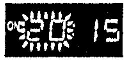
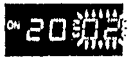
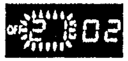
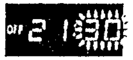
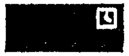
Preparation

- Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer Programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30

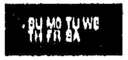
(present date; 16th October)

Operations		Display Symbols	
1	CHECK PROG		Select Timer Programme number "1".
2	Set each item by pressing + or − and NEXT.		
	− +		Set Programme position (channel) "2".
			Set Date "27". • For daily and weekly recording, see page 25.
			Set Starting time (hour) "20".
	NEXT		Set Starting time (minute) "02".
			Set Ending time (hour) "21".
			Set Ending time (minute) "30". • There is no need to press NEXT.
3	TIMER REC		To activate timer recording, press TIMER REC.

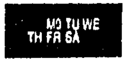
Setting for Daily and Weekly Timer Recording

In the Date setting step, press − repeatedly until the desired day(days) is displayed

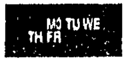
Daily recording
From Sunday to Saturday



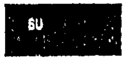
From Monday to Saturday



From Monday to Friday



Weekly recording
For example, Sunday



Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the A1 indicator for the programme position.

Selecting the Desired Tape Speed

After step 2, press NEXT and select SP or LP by pressing + or −.

Setting other Programmes in Succession

Repeat steps 1 and 2.

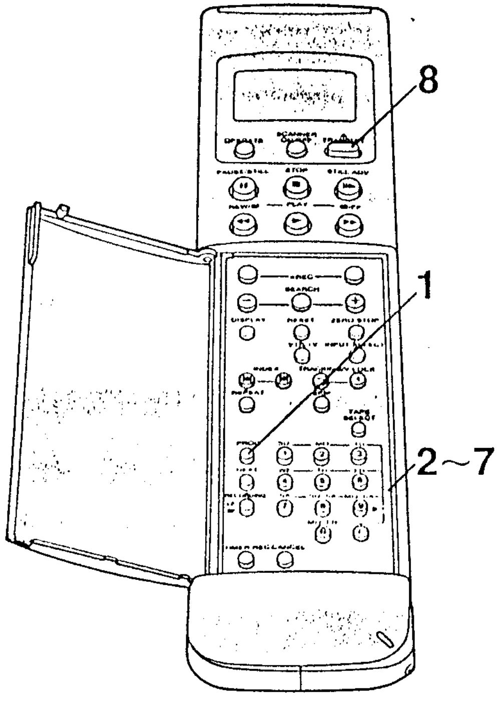
Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

Cancelling a Timer Programme

1 Release from the standby mode by pressing TIMER REC.
2 Select the timer programme number to be canceled by pressing CHECK/PROG.
3 Press + and − simultaneously for more than 3 seconds.

Using the Remote Controller



For Example:

Programme position (channel);	27
Date;	3rd. November
Starting time;	20:02
Ending time;	21:30
(Present date; 16th, October)	

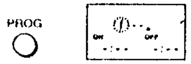
Note:
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

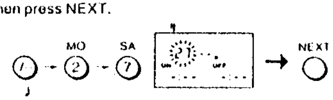
Insert a cassette tape with an intact erasure prevention tab.

Operations

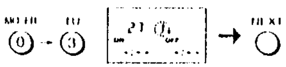
1 Press **PROG**.



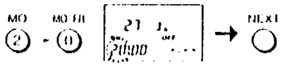
2 Enter **Programme position** "27", then press **NEXT**.



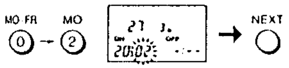
3 Enter **Date** "3", then press **NEXT**.



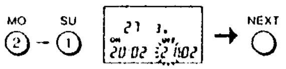
4 Enter **Starting time** (hour) "20", then press **NEXT**.



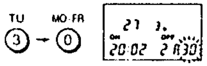
5 Enter **Starting time** (minute) "02", then press **NEXT**.



6 Enter **Ending time** (hour) "21", then press **NEXT**.



7 Enter **Ending time** (minute) "30".



8 Press **TRANSMIT**.

The transmitted data appears on the display and a repeated bleep confirms the reception.

Daily Timer Recording

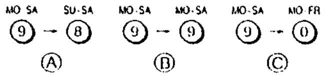
For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Saturday

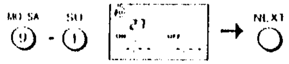
Ⓒ Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.



Weekly Timer Recording

Press the 9 button and then the numeric button within 5 seconds in step 3.
For example, SU (Sunday)



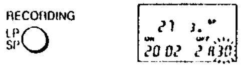
Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, press **INPUT SELECT** to select the A1 indicator for the programme position.

INPUT SELECT

Selecting the Desired Tape Speed

Press **RECORDING SP/LP** in any of step 2~7.



Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "[⏲]" is lit.
- Make sure that the display of the Remote Controller is not on.

Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

Cancelling a Timer Programme

1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

2 Press **CANCEL**.

Search Function

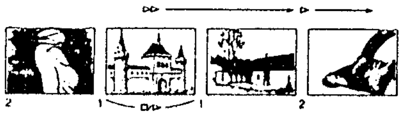
VHS Index Search System

Preparation

Insert a recorded cassette tape with index signals.

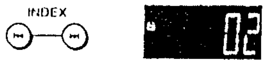
For example:

Searching for the 2nd recorded segment in the forward direction.



Operations / Display Simbols

Press INDEX ►►I twice.



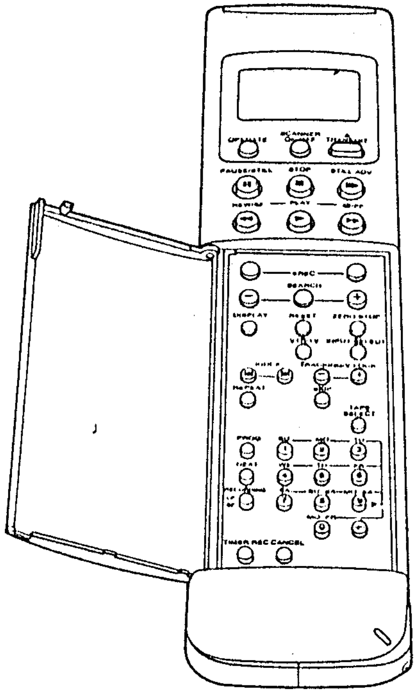
- After finding the specific recorded segment, playback starts automatically
- For the reverse direction, press INDEX I◄◄.

Recording Index Signals

Index signals are recorded in following cases.
WRITE indicator appears on the Display.

- When a recording is started by pressing REC.
- When REC is pressed during recording.
- When timer recording is activated.

Note:
The search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode and 5 minutes apart in the LP mode.

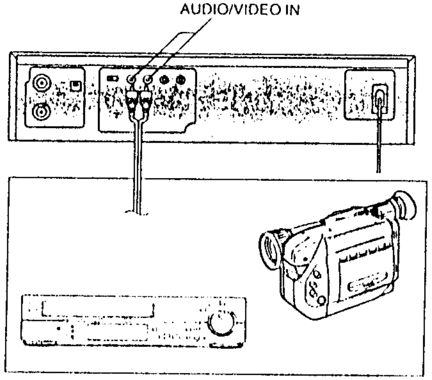


Editing

Assembly Editing

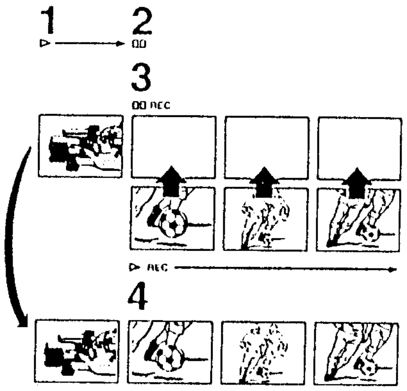
This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.



Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1.



Operations

1 Search for the end of the previous recording.

2 Press **PAUSE/STILL** at the end point.

PAUSE/STILL

3 Set for the new recording by pressing **REC**.

4 Start the new recording by pressing **PAUSE/STILL** again.

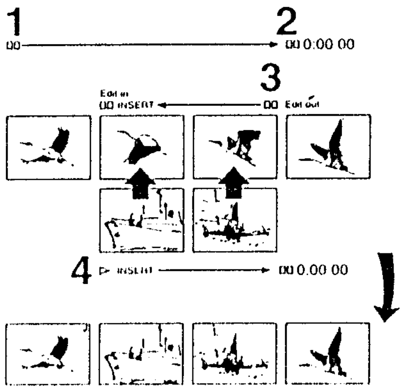
PAUSE/STILL

Insert Editing

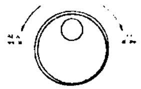
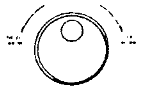
This is used to substitute one scene for another providing.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1.



Operations

Operations	Display Symbols	
1 PAUSE/STILL ○		Press **PAUSE/STILL**.
2  RESET ○		Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing **RESET**.
3  INSERT ○		Search for the Edit in (starting) point, and press **INSERT**. • If you want to replace the sound too, press **AUDIO DUB** as well.
4 PAUSE/STILL ○		Start insert editing by pressing **PAUSE/STILL**. • The insert editing will finish when the counter reaches 0:00.00.

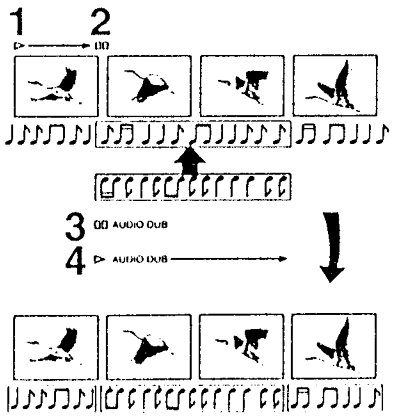
Note:
Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

Audio Dubbing

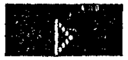
This is used to add background music, narration, etc.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing **INPUT SELECT** to set A1.



Operations

Operations	Display Symbols	
1 PLAY		Search for the starting point for audio dubbing.
2 PAUSE/STILL ○		Press **PAUSE/STILL** at the starting point.
3 AUDIO DUB ○		Set for audio dubbing by pressing **AUDIO DUB**.
4 PAUSE/STILL ○		Start recording the new sound by pressing **PAUSE/STILL**. • Stop recording by pressing **STOP**.

Bar Code Operation

Scanner Preparation

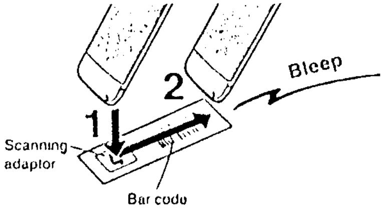
Operating the Remote Controller

This remote controller also operates as a digital-scanning bar code reader.

Press **SCANNER ON/OFF** to turn it on.

If the remote controller is not operated within 60 seconds (within 4 minutes when setting the clock time), the lamp and Display turns off.

When the lamp is not lit, press **SCANNER ON/OFF** to turn it on again.



Reading the bar codes

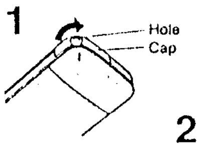
1 Fit the remote controller to the scanning adaptor.

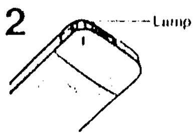
2 Trace the bar code quickly in the direction of the arrow, ensuring that you trace it completely past the last bar.
- The "Bleep" sound indicates that the bar code has been read completely.

When the Bar Codes Cannot be Read

Although the lamp in the tip of the Bar Code Reading Section lights up:
- No figures appear in the Display
- No beep sounds is heard;

The tip of the Bar Code Reading Section is probably clogged with dirt.





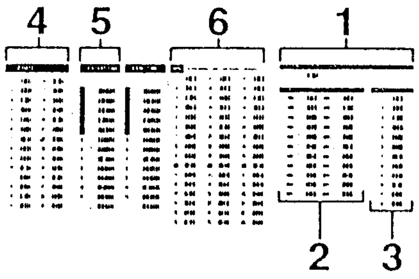
Cleaning

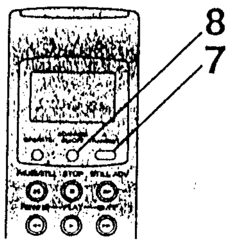
1 Remove the cap of the Bar Code Reading Section.
- Remove dirt and dust from the hole of the cap.

2 Gently wipe the tip of the lamp with a soft cloth.
- Reattach the cap by inserting it until it locks with a click.

Setting the Clock

Read in the following data successively by tracing bar codes 1 to 6 on the programming sheet.



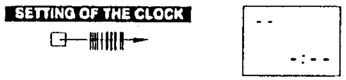


Preparation
Turn on the VTR and the remote controller.

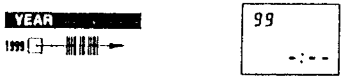
For Example:
Date; 16th, October 1999
Time; 20:15

Operations

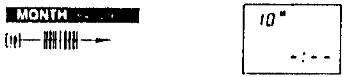
1 Trace the code for SETTING OF THE CLOCK.



2 Trace the bar code YEAR "1999".

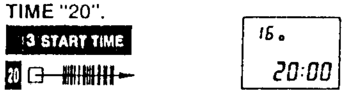


3 Trace the bar code MONTH "10".



4 Trace the bar code DATE "16".

5 Trace the bar code for the hour START TIME "20".



- The repeated bleep sound indicates correct bar code reading and readiness for transmitting the data to the VTR.

6 Trace the bar code for the minute MIN "15".

MIN
15
16
20: 15

- The bleep sound will be heard again.

7 To transmit the data to the VTR, press **TRANSMIT** toward the VTR.

- The transmitted data appears on the display, and a bleep sound confirms proper reception.

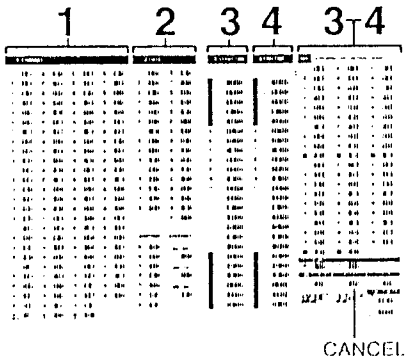
8 To turn off the remote controller, press **SCANNER ON/OFF**.

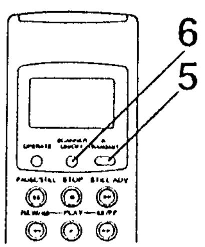
SCANNER ON/OFF

Timer Recording

Setting Timer Recordings from Bar Codes

Successively scan the data for the programme position (channel), day, starting time and ending time by tracing bar codes 1 to 4 on the programming sheet.





Preparation

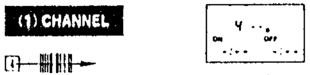
Turn on the VTR and the remote controller.

For Example:

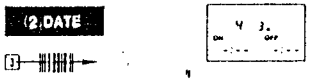
Programme position (channel): 4
Date: 3rd, November
Starting time: 20.02
Ending time: 21:30
(Present date; 16th, October)

Operations

1 Trace the bar code for **CHANNEL "4"**.

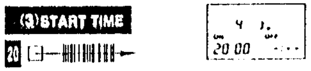


2 Trace the bar code for **DATE "3"**.

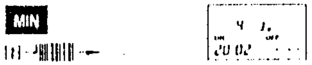


3 Set Starting time.

- Trace the bar code for **START TIME "20"**.

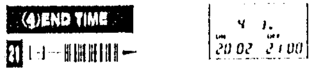


- Trace the bar code for **MIN "2"**.



4 Set Ending time.

- Trace the bar code for **END TIME "21"**.



The repeated bleep sound indicates readiness for data transmission to the VTR.

- Trace the bar code for **MIN "30"**.

MIN
30
4
3.
20 02
21 30

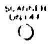
The bleep sound will be heard again.

5 To transmit the data to the VTR, press **TRANSMIT** toward the VTR.

- The transmitted data appears on the display of the VTR and a bleep sound confirms proper reception.

Programming a Series Timer Recordings
Trace the CANCEL bar code.
Repeat the required steps 1 to 5 for each timer recording.

6 To turn off the remote controller, press **SCANNER ON/OFF**.



Daily Timer Recording

For this time setting, three day patterns can be selected:

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Friday

Ⓒ Daily recording from Monday to Saturday

(SU~SA)
(MO~FR)
(MO~SA)
Ⓐ
Ⓑ
Ⓒ

Weekly Timer Recording

Trace the bar code for the day of the week in the EVERYWEEK column.
For example, SU (Sunday)

EVERYWEEK
SU
4

Timer Recording from an External Signal Source

If a timer recording is to be made from a signal source that is connected to the Audio/Video input sockets, the "AV" bar code in the CHANNEL column must be traced for the programme.

AV
LINE IN
A 1

Selecting the Desired Tape Speed

Trace the bar code for RECORDING "SP" or "LP".

RECORDING
SP
4
3.
20 02
21 30

Turning the Timer on and off

After programming a timer recording, the timer recording indicator "⌚" lights up, and the VTR can no longer be used for normal recording and playback. To make it possible to use the VTR, trace the TIMER ON/OFF bar code and transmit to the VTR (the timer recording indicator "⌚" will go out). To reactivate the timer again, trace the TIMER ON/OFF bar code again and transmit to the VTR (the "⌚" indicator will light again).

TIMER ON/OFF

Checking a Timer Programme

The VTR must be turned on, or the timer recording indicator "⌚" is lit.

1 Trace the CHECK bar code.

2 Transmit the data to the VTR.
- To check the settings for the next timer recording, press TRANSMIT.

Cancelling a Timer Programme

The data for the timer recording must first be displayed.

1 Trace the CHECK bar code.

2 Transmit the data to the VTR.

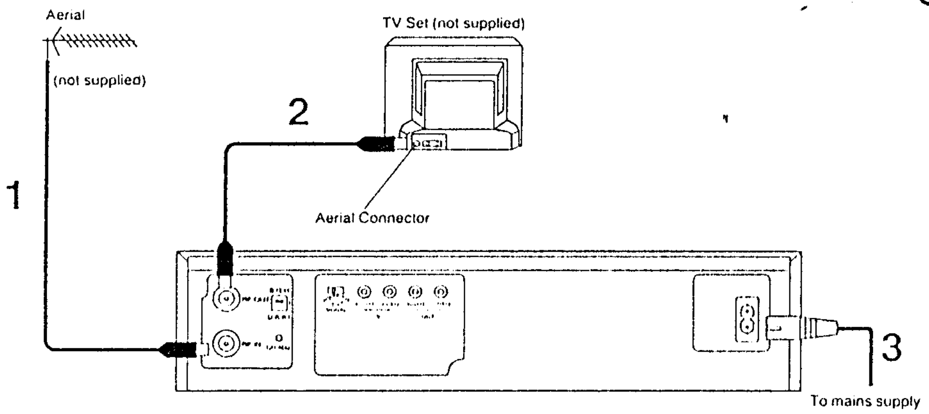
3 Trace the CANCEL bar code.

4 Transmit the data to the VTR.

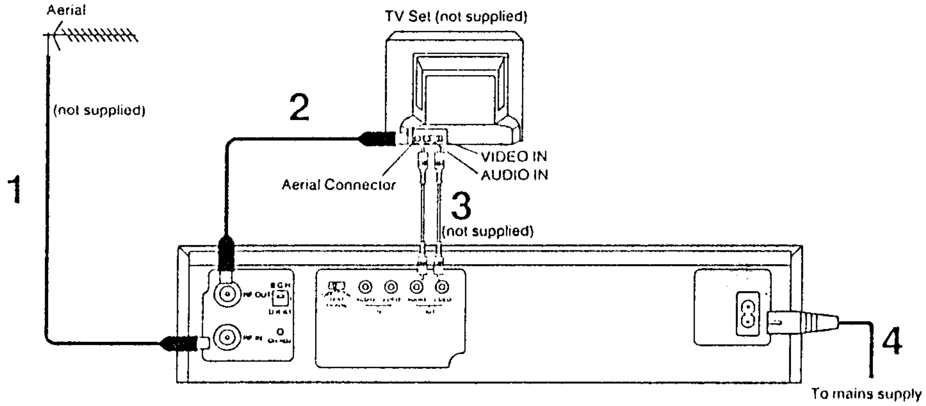
Connections

Basic Connections

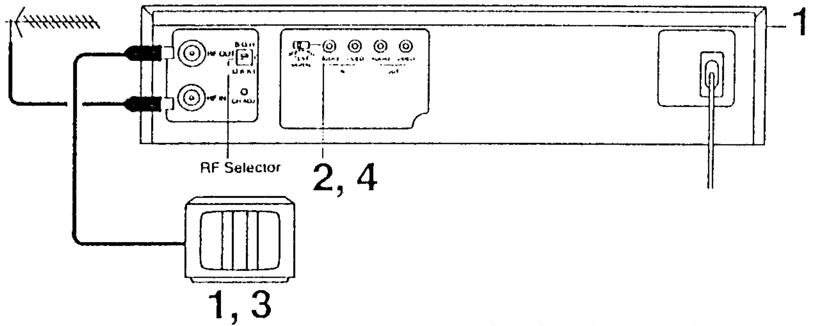
The following connections are required to record and play back the VTR through a TV set:


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
3
To mains supply

Connection to a TV Set with the Audio/Video Input Sockets


Aerial
(not supplied)
TV Set (not supplied)
2
1
Aerial Connector
VIDEO IN
AUDIO IN
3
(not supplied)
4
To mains supply

Tuning the TV into your VTR


1
RF Selector
2, 4
1, 3

It is possible to view the video picture on your TV in the same way that you watch TV broadcasts.

If you have connected the VTR to the TV through the video and audio input sockets then you do not need to follow the procedure mentioned below.

Operations

1 Front

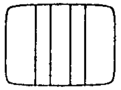
Turn on the TV and VTR.

2

OFF
ON
TEST
SIGNAL

To generate a test pattern, set **TEST SIGNAL** to ON.

3



Set the TV to an unused position which you wish to use for your video playback.

4

OFF
ON
TEST
SIGNAL

Set **TEST SIGNAL** to OFF.

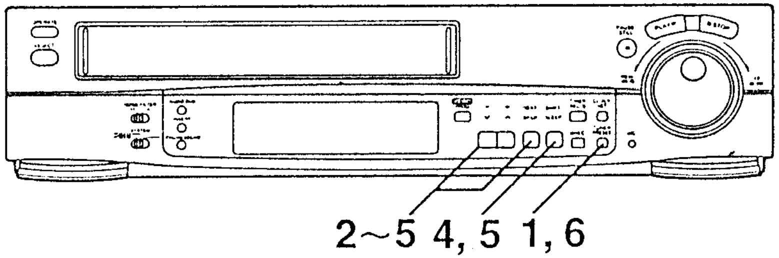
Note:
The test signal is transmitted on video channel C25 (PAL D), E38 (PAL B.G.H.I.K.K1) or US between 36 and 37 (NTSC). If you are encountering interference from a TV broadcast on this video channel, you may readjust to another free channel (C24~27, E34~40, US 29~39) by using the CH ADJ. screw which is located on the rear of the VTR.
Please note that if the CH ADJ. screw is used then you will have to retune your TV to the test signal as in item 2 to 4 above.

RF Selector
Use the RF Selector to select the colour TV system used by the TV set to be connected.

B.G.H: PAL B.G.H/SECAM B.G
I: PAL I
D.K.K1: PAL D/SECAM D.K.K1

- When **SYSTEM** on the front panel is at the NTSC 3.58 position, the NTSC 3.58 system will be selected regardless of the position of the RF selector.

Storing TV Broadcasts into your VTR

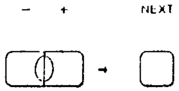
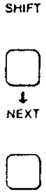
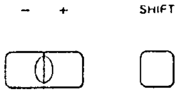
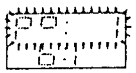


Introduction

The VTR is fitted with its own tuner (just like a normal TV set) and can be pre-set to receive up to 99 TV broadcast stations.

Preparation

- Confirm that the TV is on and the VTR viewing channel is selected.
- Turn on the VTR and select the programme position except A1.

	Operations	Display Symbols	
1	TUNER PRESET		Keep **TUNER PRESET** pressed for more than 2 seconds.
2	– + NEXT 		Select the programme position, then press **NEXT**.
3	+		Select TV band "I", "III" or "U".
4	SHIFT NEXT 		Select the broadcasting system. • 1 (PAL B.G.H.D/SECAM B.G.D.K.K1): For receiving PAL B.G.H.D or SECAM B.G.D.K.K1 system broadcasts. Press PAL/MESECAM to select SECAM system so that MESECAM indicator is lit. • 2 (PAL I): For receiving PAL I system broadcasts. • 3 (NTSC): For receiving NTSC system broadcasts. Then press **NEXT**.
5	– + SHIFT 		Search for the required TV station by pressing and holding + or –. Release once the station has been found. • Search speed changes quickly by pressing SHIFT simultaneously with + or –. • Press NEXT and repeat steps 2–5 for each programme position you want to tune to a station.
6	TUNER PRESET		Press **TUNER PRESET** twice.

Fine Tuning Procedure

1. Press **TUNER PRESET** for more than 2 seconds, and then press again.
2. Press **NEXT**.
3. Press + or – to obtain the best tuning condition.
   - "AFC" indicator will not be displayed.
   - To return the tuning to its former state, press **SHIFT**.
4. Press **TUNER PRESET**.

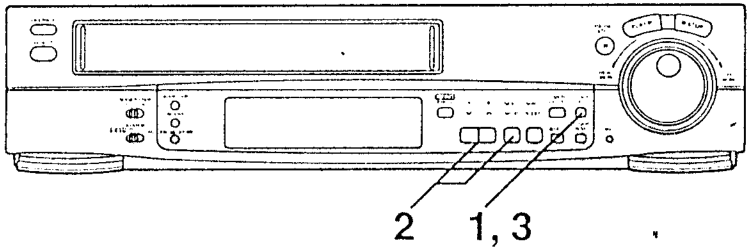
Blanking of Unoccupied Programme Positions

1. Press **TUNER PRESET** for more than 2 seconds.
2. Select a programme position which you do not want to tune to a TV station, by using + or –.
3. Press **SHIFT**. ("– –" is displayed.)
   - Repeat steps 2 and 3 for other unoccupied programme positions to skip during the selection of the programme positions.
   - To cancel the blanking of a programme position, select that programme position on the VTR and then press SHIFT.
4. Press **TUNER PRESET** twice.

Channel Plan

		VHF		UHF
	System	I	III	U
1	CCIR STD (B.G.H)	2-4	5-12	21-69
	CHINA (D)	1-5	6-12	13-57
	EAST EU (D.K.K1)	1-5	6-12	21-69
2	HONG KONG, UK (I)	NOT AVAILABLE		21-69
3	USA (NTSC)	2-6	7-13	14-78

Setting the Clock of the VTR



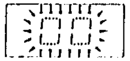
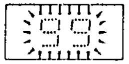
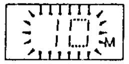
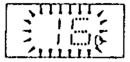
The built-in digital clock employs the 24-hour system.

Preparation

Turn on the VTR.

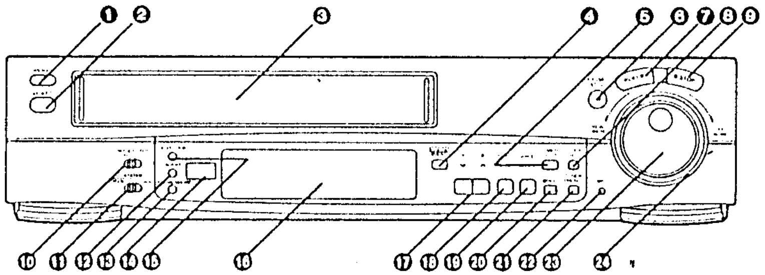
For Example:

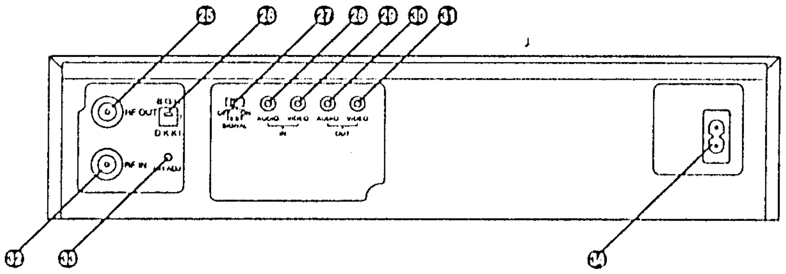
Date: 16th, October, 1999
Time: 20:15

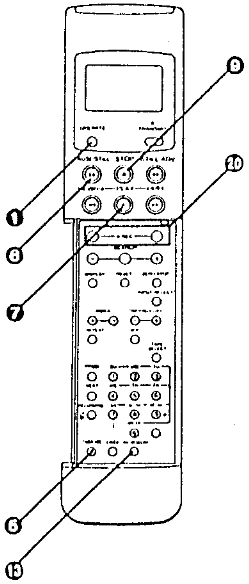
Operations	Display Symbols	
1 CLOCK SET		Keep **CLOCK SET** pressed for more than 2 seconds.
2 Set each item by pressing + or – and **NEXT**.		
– +		Set Year "99".
		Set Month "10".
		Set Date "16".
NEXT		Set Hour "20".
		Set Minute "15". • There is no need to press **NEXT**.
3 CLOCK SET		Press **CLOCK SET**. • The clock will start.

Note:
The clock operates for at least 60 minutes by its backup system in the event of power failure.

Time reset function
XX:00.00 can be set by performing the operation steps 1 and 3 during XX:58.00~XX:01:59.







❶ **OPERATE**
To turn the VTR on and off.

❷ **EJECT**
To eject a video cassette.

❸ **Cassette Compartment**
Insert a video cassette here.

❹ **CHECK/PROG**
To select a timer programme number.
"1, 2, 3... or 8" is lit.
To display details of preset timer recording.

❺ **TIMER REC**
To turn the timer recording function on and off.
⏲ Is lit or not lit.
The VTR can only be operated manually when the timer recording function is off.

❻ **PAUSE/STILL**
During playback: Still picture.
During recording: To interrupt recording.

❼ **PLAY**
To start playback. "▷" is lit.

❽ **CLOCK SET**
To set the time.

❾ **STOP**
To stop any playback or recording.

⑩ **NOISE FILTER**
OFF: For normal VTR operation.
ON: For playback of a cassette whose recording quality is inferior.

⑪ **SYSTEM**
Set according to the colour TV system.
NTSC 3.58: When receiving NTSC 3.58 signals
NTSC 4.43: When receiving NTSC 4.43 signals.
PAL/MESECAM: When receiving PAL or SECAM signals.

⑫ **INSERT**
To set up the VTR for insert editing
INSERT indicator lights up

⑬ **PAL/MESECAM**
Set according to the colour TV system used during recording and playback.
When the MESECAM indicator is lit, the MESECAM system is selected.

⑭ **Infra-red Remote Control Receiver Window**

⑮ **AUDIO DUB**
To set up the VTR for audio dubbing.
A.DUB indicator lights up.

⑯ **Display**

⑰ **∨ ∧/– +**
To select the required programme position (TV station).
To set the clock and timer recording.

⑱ **NEXT/SP/LP**
To proceed to the next item during setting procedure.
To select the tape speed required for recording.
SP gives the best picture quality.
LP gives the longest recording time.

⑲ **SLEEP/SHIFT**
To set the time to turn off the VTR automatically.
To blank unoccupied programme position.

⑳ **REC**
To start a recording.

㉑ **TUNER PRESET**
To initiate TV station settings for the tuner.

㉒ **MIC**
To connect a microphone for recording.

㉓ **Jog Dial**
To locate any desired frame with utmost precision.

㉔ **Shuttle Ring**
In the stop mode: To rewind or fast forward the tape.
In the playback mode:
To search picture backward or forward.
In the still playback mode:
To adjust playback speed backward or forward.
In the rewind or fast forward mode:
To obtain high speed picture.

㉕ **RF OUT**
To connect to the aerial terminal on a TV set.

㉖ **RF Selector**
To select the colour TV system used by the TV set to be connected.
B.G.H: PAL B.G.H/SECAM B.G
I: PAL I
D.K.K1: PAL D/SECAM D.K.K1
- When **SYSTEM** on the front panel is at the NTSC 3.58 position, the NTSC 3.58 system will be selected regardless of the position of the RF selector.

㉗ **TEST SIGNAL**
The test signal is transmitted on channel E38, C25 or US between 36 and 37.

㉘ **AUDIO IN**
To connect an audio cable to a video camera or another video recorder.

㉙ **VIDEO IN**
To connect a video cable to a video camera or another video recorder.

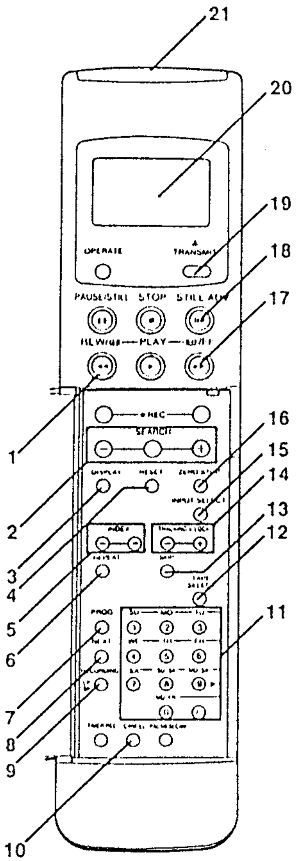
㉚ **AUDIO OUT**
To connect an audio cable to a TV or another video recorder.

㉛ **VIDEO OUT**
To connect a video cable to a TV or another video recorder.

㉜ **RF IN**
To connect to the external aerial.

㉝ **CH ADJ.**
To adjust the RF transmitting channel E34~40 (C24~27, US 29~39).

㉞ **AC IN~**
To connect to the main power supply.



1 **REW (REWIND)**

In the stop mode:	To rewind the tape.
In the playback mode:	To search backward.
In the rewind mode:	To obtain high speed picture.

"◁◁" is lit.

2 **SEARCH**

To adjust the playback speed backward or forward.

3 **DISPLAY**

To change the indication on the VTR Display.

→Clock→Counter→Remaining Tape Time

4 **RESET**

To reset the tape counter (elapsed time) to "0:00 00".
- The tape counter is automatically reset to "0:00.00" when a video cassette is inserted.

5 **INDEX**

For the Index search function.

6 **REPEAT**

For the repeat playback function.

7 **PROG**

For timer recording by using the remote controller.

8 **NEXT**

To proceed to the next item during setting procedure.

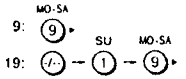
9 **RECORDING SP/LP**

To select the tape speed desired for recording.

10 **CANCEL**

To cancel the settings made for a timer recording.

11 **Programme Position Selector Buttons**
- To select the programme positions.



- To programme a timer recording.

12 **TAPE SELECT**

To set the cassette tape length in order to obtain correct indication of the remaining tape time.

E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

13 **SKIP**

To start cue playback in 30 seconds interval during playback.
- Each press gives a 30 seconds time span up to 4 minutes.

14 **TRACKING/V-LOCK**

For manual tracking adjustment

The + and – buttons are used to adjust the tracking when, for example, noise bars on the picture are better removed manually than by the automatic digital tracking control. After making a manual adjustment, press both buttons together to return to automatic digital tracking control.

For slow tracking adjustment

When noise bars appear during Still, Still Advance or Slow playback, switch over to slow playback and adjust with the "+" or "–" Button to reduce the noise bars.

For vertical locking adjustment

Use the + and – buttons to minimize any vertical jitter during still-picture playback.

15 **INPUT SELECT**

To select the "A1" external recording source.

16 **ZERO STOP**

For the zero stop function

17 **FF (FAST FORWARD)**

In the stop mode:	To fast forward the tape
In the playback mode:	To search forward
In the fast forward mode:	To obtain high speed picture.

"▷▷" is lit.

18 **STILL ADV**

To advance a still picture during still playback.

19 **TRANSMIT**

To transmit the data that has been set on the remote controller to the VTR.

20 **Display**

21 **Infra-red Transmitter**

The programming data are transmitted from here to the VTR.

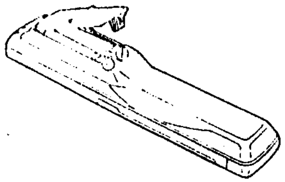
Power source for the remote controller

The remote controller is powered by 2 "UM3" or "R6" size batteries. The life of the batteries is about one year, although this depends on the frequency of use.
- If the display flickers when a button on the remote controller is pressed, please replace the batteries with new ones.

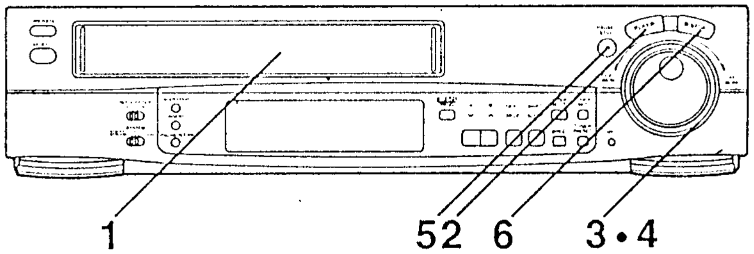
Precautions for battery replacement

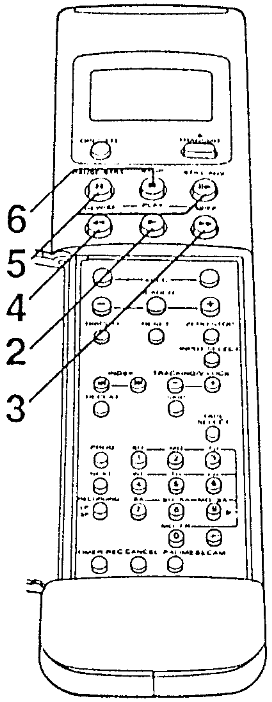
- Load the new batteries with their polarity (+ and –) aligned correctly.
- Do not apply heat to the batteries, or an internal short-circuit may occur.
- If you do not intend to use the remote controller for a long period of time, remove the batteries and store them in a cool and dry place.
- Remove spent batteries immediately and dispose of them.
- Do not use an old and a new battery together, and never use an alkaline battery with a manganese battery.

Loading the batteries



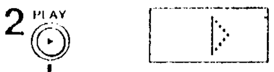
Playback



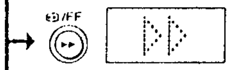


Operations **Display Symbols**

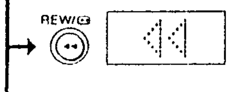
1
Insert a recorded cassette tape.

2 

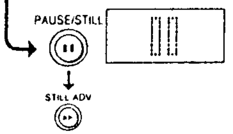
Start viewing the picture.

3 

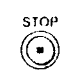
Search forward by tapping FF.
- To change back to normal playback, press PLAY.

4 

Search backward by tapping REW.
- To change back to normal playback, press PLAY.

5 

View a still picture.
- To advance one frame of the still picture, press STILL ADV.
- To continue the normal playback, press PLAY or PAUSE/STILL again.

6 

Stop viewing the picture.

Other Playback Functions

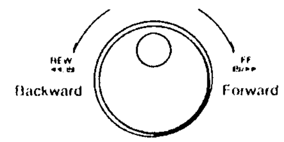
To change the playback speed

Using Shuttle Ring:

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Rotate Shuttle Ring.



Using Remote Controller:

1 Press **SEARCH**.

2 Press + or – repeatedly

+: To increase the playback speed forward

–: To increase the playback speed backward

SEARCH

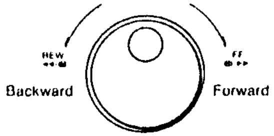
⊖—○—⊕

To locate the desired picture exactly

1 Press **PAUSE/STILL**.

PAUSE/STILL

2 Turn Jog Dial.



To obtain high speed picture during fast forward or rewind

Keep **FF** pressed during fast forward.
Keep **REW** pressed during rewind.

⏪/FF REW/⏩

- The same operation can also be performed by turning the Shuttle Ring.

To skip some scene

Press **SKIP** during playback.

SKIP

○

- The following 30 seconds will be skipped.
- Each press gives a 30 seconds time span up to 4 minutes.

To stop at a specified scene

1 Press **RESET** to set the counter to 0:00.00.

RESET

○

2 After playback, press **ZERO STOP** in the stop mode.

ZERO STOP

○

- The tape will be rewound or fast forwarded to 0:00.00.

To playback a recorded part repeatedly

Press **REPEAT** in the stop mode.

REPEAT

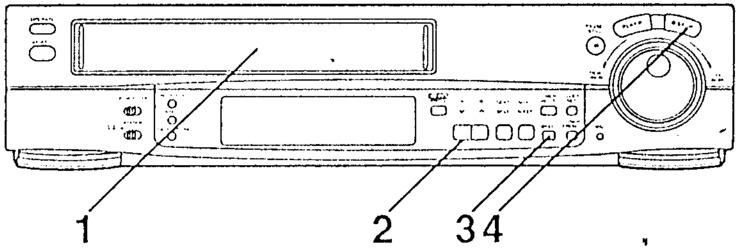
○

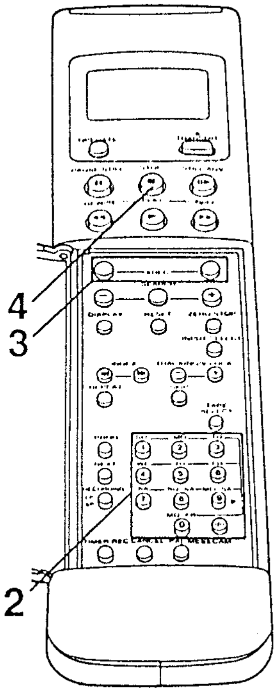
Notes:
- During Playback, set **PAL/MESECAM**.

PAL:	When playing back a tape recorded in the PAL system.
MESECAM:	When playing back a tape recorded in the MESECAM system. MESECAM Indicator lights up.

- Cue, review or slow playback will be automatically released after 10 minutes, and still playback after 5 minutes.

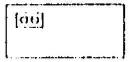
On-the-spot Recording





Operations **Display Symbols**

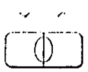
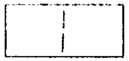
1



Insert a cassette tape.

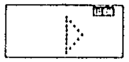
- If it has already been inserted, press **OPERATE** to turn the VTR on.

2

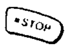
Select TV station.

3



Start recording.

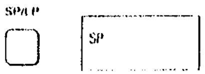
4



Stop recording.

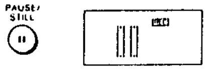
To select the desired tape speed

Press **SP/LP** before recording.



To interrupt recording

Press **PAUSE/STILL** during recording.
Press again to continue recording.



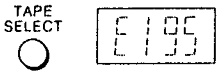
To record one TV programme while viewing another programme

1 Use the on-the-spot recording operations.

2 Select the TV programme on your TV set you wish to view at the present time.

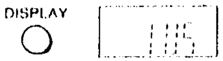
To display the approximate remaining tape time

1 Press **TAPE SELECT** to select the corresponding cassette tape length.



E195: For E30, -60, -80, -120, -180 and -195 tapes.
E240: For E240 tape.
E260: For E260 tape.

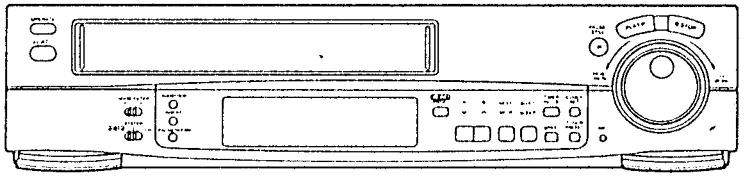
2 Press **DISPLAY**.



Notes:

- Set **SYSTEM** according to the colour TV system.
  NTSC 3.58: When receiving NTSC 3.58 signals.
  NTSC 4.43: When receiving NTSC 4.43 signals.
  PAL/MESECAM: When receiving PAL or SECAM signals.
- When a video cassette with a broken off tab is inserted, the "▭" indication will flash to indicate that recording is not possible.
- The recording pause mode will be automatically released after 5 minutes.

Other Functions



Automatic VTR off time setting

Press SLEEP for the desired time.

- Each press gives a 30 minutes time span up to 9 hours.
- To cancel the setting time, press SLEEP repeatedly to set 0:00.

NTSC Playback

Tapes recorded in the NTSC system can be played back with this VTR.

- Set SYSTEM according to the colour TV system of the TV set.

NTSC 3.58: Via a NTSC 3.58 system TV set.
NTSC 4.43: Via a NTSC 4.43 system TV set.
PAL/MESECAM: Via a PAL system TV set.

Other Automatic Functions

Automatic playback

When a cassette without an erasure prevention tab is inserted, the VTR starts playback automatically.

VTR-off playback

When the VTR is off, an inserted cassette can be played back by pressing PLAY.

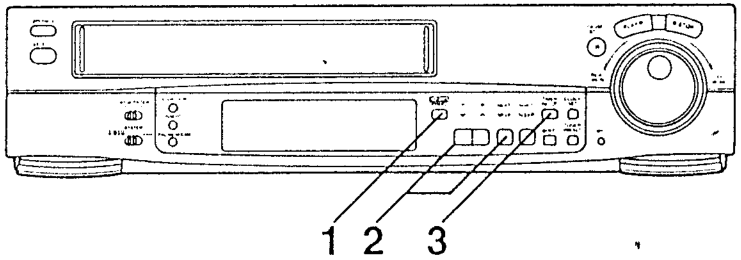
Automatic rewinding

When the tape reaches its end during recording (except for timer recording) or playback, it will automatically be rewound to the beginning.

Automatic switching off and ejection

When the VTR is switched off, an inserted cassette can be ejected simply by pressing EJECT. The VTR will eject the cassette and automatically turn itself off again.

Timer Recording

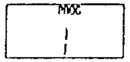
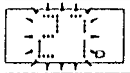
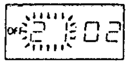


Preparation

- Insert a cassette tape with an intact erasure prevention tab.

For Example:

Timer Programme number;	1
Programme position (channel);	2
Date;	27th, October
Starting time;	20:02
Ending time;	21:30
(present date; 10th October)	

Operations	Display Symbols	
1 CHECK PROG		**Select Timer Programme number "1".**
2 Set each item by pressing + or – and NEXT.		
– +		Set **Programme position** (channel) "2".
		Set **Date** "27". • For daily and weekly recording, see page 25.
↓		Set **Starting time** (hour) "20".
NEXT		Set **Starting time** (minute) "02".
		Set **Ending time** (hour) "21".
		Set **Ending time** (minute) "30". • There is no need to press NEXT.
3 TIMER REC		To activate timer recording, press TIMER REC.

Setting for Daily and Weekly Timer Recording

In the Date setting step, press – repeatedly until the desired day(days) is displayed.

Daily recording From Sunday to Saturday	SU MO TU WE TH FR SA
From Monday to Saturday	MO TU WE TH FR SA
From Monday to Friday	MO TU WE TH FR
Weekly recording For example, Sunday	SU

Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, select the A1 indicator for the programme position.

Selecting the Desired Tape Speed

After step 2, press NEXT and select SP or LP by pressing + or –.

Setting other Programmes in Succession

Repeat steps 1 and 2.

Checking a Timer Programme

Select the timer programme number to be checked by pressing CHECK/PROG.

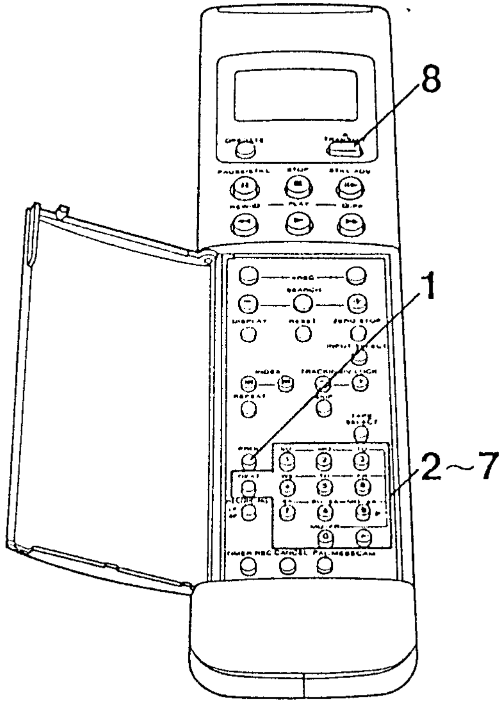
Cancelling a Timer Programme

1 Release from the standby mode by pressing TIMER REC.

2 Select the timer programme number to be canceled by pressing CHECK/PROG.

3 Press + and – simultaneously for more than 3 seconds.

Using the Remote Controller



For Example:

Programme position (channel):	27
Date:	3rd. November
Starting time:	20:02
Ending time:	21:30

(Present date; 16th, October)

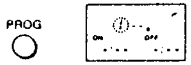
Note:
If no operation is performed on the remote controller for more than 60 seconds, the Display turns off.

Preparation

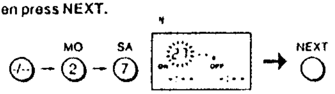
Insert a cassette tape with an intact erasure prevention tab.

Operations

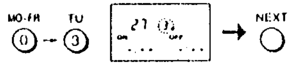
1 Press PROG.



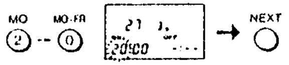
2 Enter Programme position "27", then press **NEXT.**



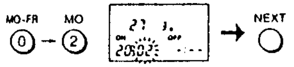
3 Enter Date "3", then press **NEXT.**



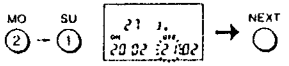
4 Enter Starting time (hour) "20", then press **NEXT.**



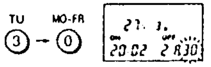
5 Enter Starting time (minute) "02", then press **NEXT.**



6 Enter Ending time (hour) "21", then press **NEXT.**



7 Enter Ending time (minute) "30".



8 Press TRANSMIT.

The transmitted data appears on the display.

Daily Timer Recording

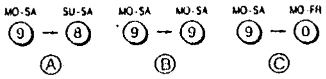
For this timer function, several groups of days can be selected.

Ⓐ Daily recording from Sunday to Saturday

Ⓑ Daily recording from Monday to Saturday

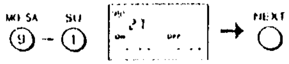
Ⓒ Daily recording from Monday to Friday

Press the following numeric button within 5 seconds to select the group of days in step 3.



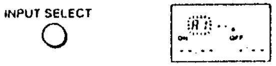
Weekly Timer Recording

Press the 9 button and then the numeric button within 5 seconds in step 3.
For example, SU (Sunday)



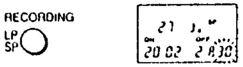
Timer Recording from External Signal Source

If Timer Recording is performed by a unit connected to the Audio/Video input sockets, press **INPUT SELECT** to select the A1 indicator for the programme position.



Selecting the Desired Tape Speed

Press **RECORDING SP/LP** in any of step 2~7.



Checking a Timer Programme

- The VTR must be turned on, or the timer recording indicator "[⌚]" is lit.
- Make sure that the display of the Remote Controller is not on.

Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

Cancelling a Timer Programme

1 Press **TRANSMIT** repeatedly until the desired timer programme number is displayed.

2 Press **CANCEL.**

Search Function

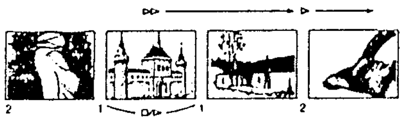
VHS Index Search System

Preparation

Insert a recorded cassette tape with index signals.

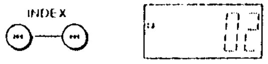
For example:

Searching for the 2nd recorded segment in the forward direction.



Operations / Display Simbols

Press INDEX ►►I twice.



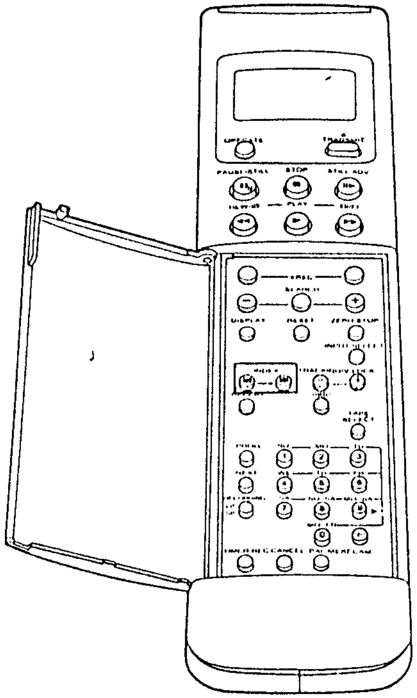
- After finding the specific recorded segment, playback starts.
- For the reverse direction, press INDEX I◄◄.

Recording Index Signals

Index signals are recorded in following cases.
WRITE indicator appears on the Display.

- When a recording is started by pressing REC.
- When REC is pressed during recording.
- When timer recording is activated.

Note:
The search function can only work correctly, if the index signals are spaced at least 3 minutes apart in the SP mode and 5 minutes apart in the LP mode.

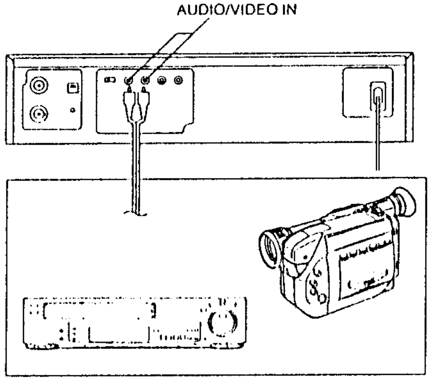


Editing

Assembly Editing

This function can be used to make up an edited tape from other recordings or video sources.

A new scene can be added to the end of a previous one.



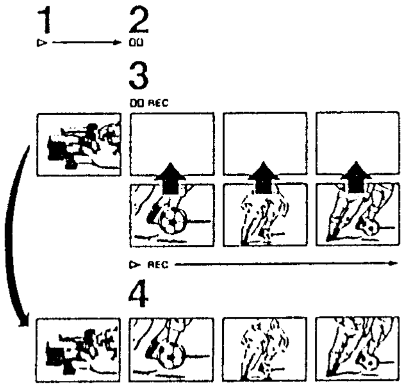
Preparation

- Connect a movie camera or another VTR to this VTR as shown.
- Insert a recorded cassette tape with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1.
- Set SYSTEM according to the colour TV system of the video source.

NTSC 3.58:	When receiving NTSC 3.58 signals.
NTSC 4.43:	When receiving NTSC 4.43 signals.
PAL/MESECAM:	When receiving PAL or SECAM signals.

- Set PAL/MESECAM.

PAL:	When receiving PAL signals.
MESECAM:	When receiving SECAM signals. The MESECAM Indicator lights up.



Operations

1 Search for the end of the previous recording.

PLAY

2 Press PAUSE/STILL at the end point.

PAUSE/STILL

3 Set for the new recording by pressing REC.

●REC

4 Start the new recording by pressing PAUSE/STILL again.

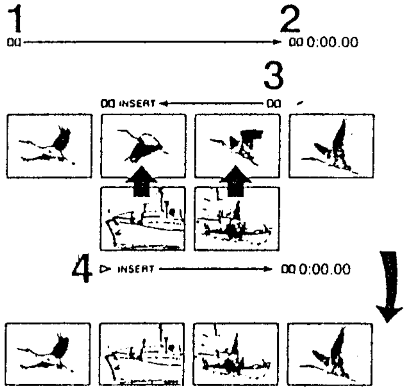
PAUSE/STILL

Insert Editing

This is used to substitute one scene for another providing.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1.



Operations		Display Symbols	
1	PAUSE/STILL	||	Press PAUSE/STILL.
2	RESET	0:00 00	Search for the Edit out (ending) point, and set the counter to 0:00.00 by pressing RESET.
3	INSERT	||	Search for the Edit in (starting) point, and press INSERT. • If you want to replace the sound too, press AUDIO DUB as well.
4	PAUSE/STILL	▷	Start insert editing by pressing PAUSE/STILL. • The insert editing will finish when the counter reaches 0:00.00.

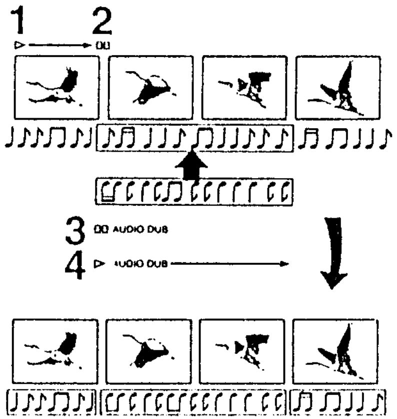
Note:
Insert Editing cannot be used on blank sections of a tape. In this case use Assembly Editing first.

Audio Dubbing

This is used to add background music, narration, etc.

Preparation

- Insert a recorded cassette with an intact erasure prevention tab.
- Select the video source required by pressing INPUT SELECT to set A1.



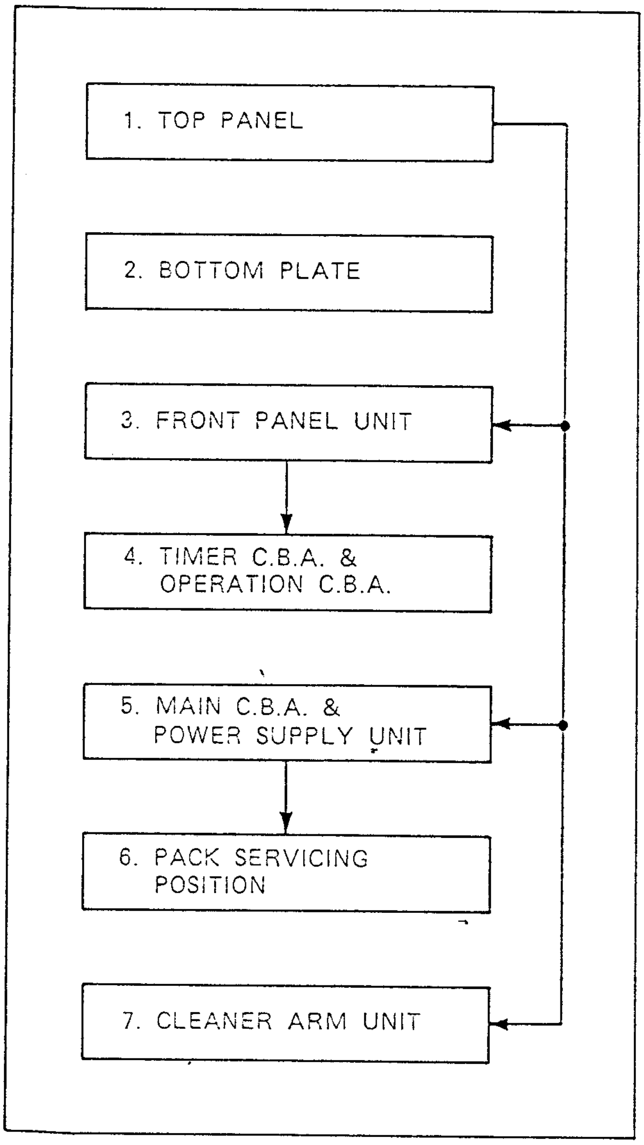
Operations		Display Symbols	
1	PLAY	▷	Search for the starting point for audio dubbing.
2	PAUSE/STILL	||	Press PAUSE/STILL at the starting point.
3	AUDIO DUB	||	Set for audio dubbing by pressing AUDIO DUB.
4	PAUSE/STILL	▷	Start recording the new sound by pressing PAUSE/STILL. • Stop recording by pressing STOP.

SECTION 2
ADJUSTMENT PROCEDURES

2-1. DISASSEMBLY METHOD

2-1-1. DISASSEMBLY FLOW CHART

This flow chart indicates disassembly steps of the cabinet parts and the circuit boards in order to find the necessary items for servicing.
When reassembling, perform the steps in the reverse order.



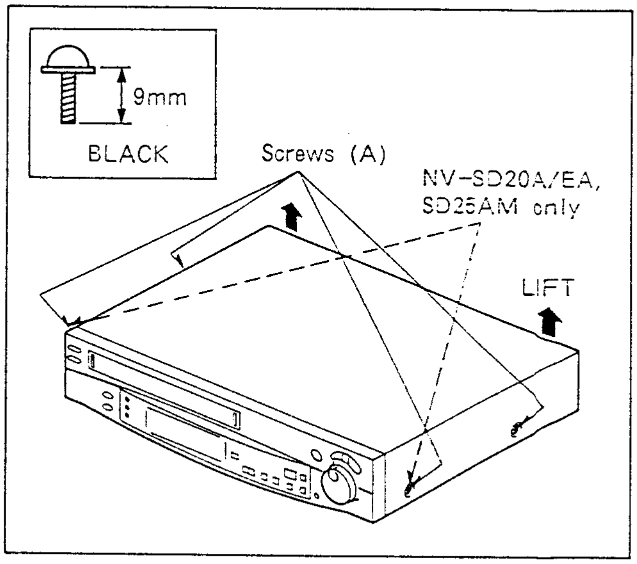
1. TOP PANEL
2. BOTTOM PLATE
3. FRONT PANEL UNIT
4. TIMER C.B.A. & OPERATION C.B.A.
5. MAIN C.B.A. & POWER SUPPLY UNIT
6. PACK SERVICING POSITION
7. CLEANER ARM UNIT

Fig. D1

2-1-2. DETAIL OF DISASSEMBLY METHOD

1. REMOVAL OF THE TOP PANEL

Removal.....2 Screws(A)
(NV-SD10A/EA/AM)
Removal.....4 Screws(A)
(NV-SD20A/EA,SD25AM)

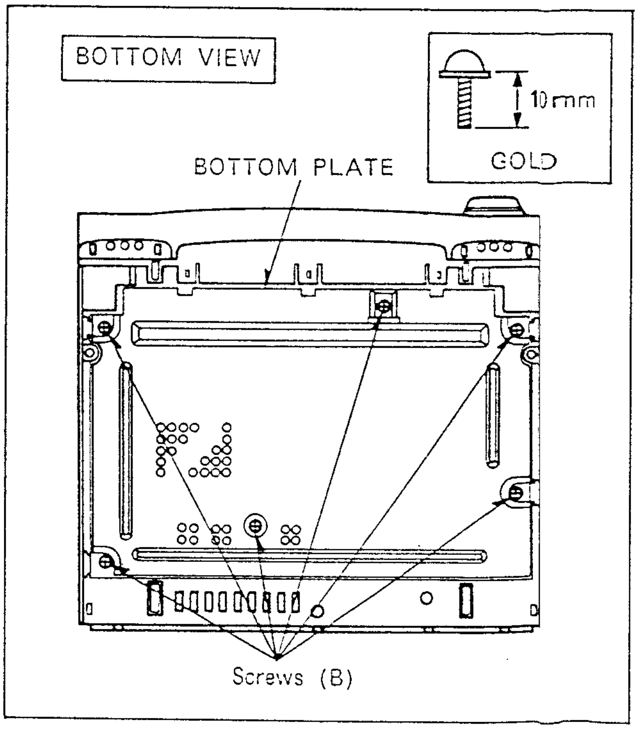


9mm
BLACK
Screws (A)
NV-SD20A/EA, SD25AM only
LIFT

Fig. D2

2. REMOVAL OF THE BOTTOM PLATE

Remove.....6 Screws(B)



BOTTOM VIEW
10mm
GOLD
BOTTOM PLATE
Screws (B)

Fig. D3

3. REMOVAL OF THE FRONT PANEL UNIT

Pull OUT.....Jog/Shuttle Dial
Remove.....Screw(C)
Unlock.....6 Tabs(D)

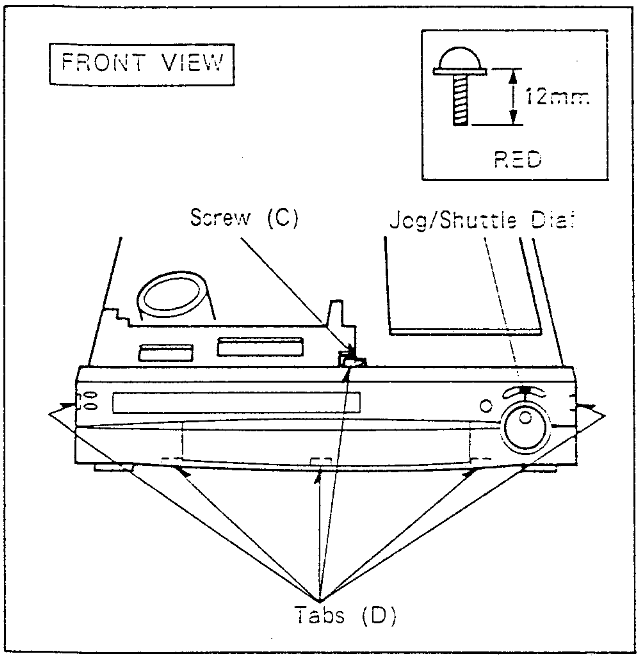

FRONT VIEW
12mm
RED
Screw (C)
Jog/Shuttle Dial
Tabs (D)

Fig. D4

4. REMOVAL OF THE TIMER C.B.A. & OPERATION C.B.A.

REMOVAL OF THE TIMER C.B.A.

Disconnect.....Bridge Connector(E)
Unlock.....6 Tabs(F)

REMOVAL OF THE OPERATION C.B.A. (NV-SD20A/EA,SD25AM only)

Disconnect.....Bridge Connector(E)
Unlock.....2 Tabs(G)

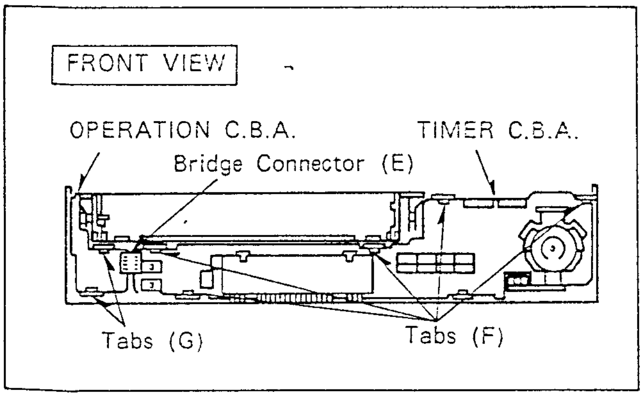

FRONT VIEW
OPERATION C.B.A.
TIMER C.B.A.
Bridge Connector (E)
Tabs (G)
Tabs (F)

Fig. D5

5. REMOVAL OF THE MAIN C.B.A. & POWER SUPPLY UNIT

REMOVAL OF THE MAIN C.B.A.

Remove.....4 Screws(H),(I)
Unlock.....4 Tabs(J)

REMOVAL OF THE POWER SUPPLY UNIT

Remove.....2 Screws(H),(K)

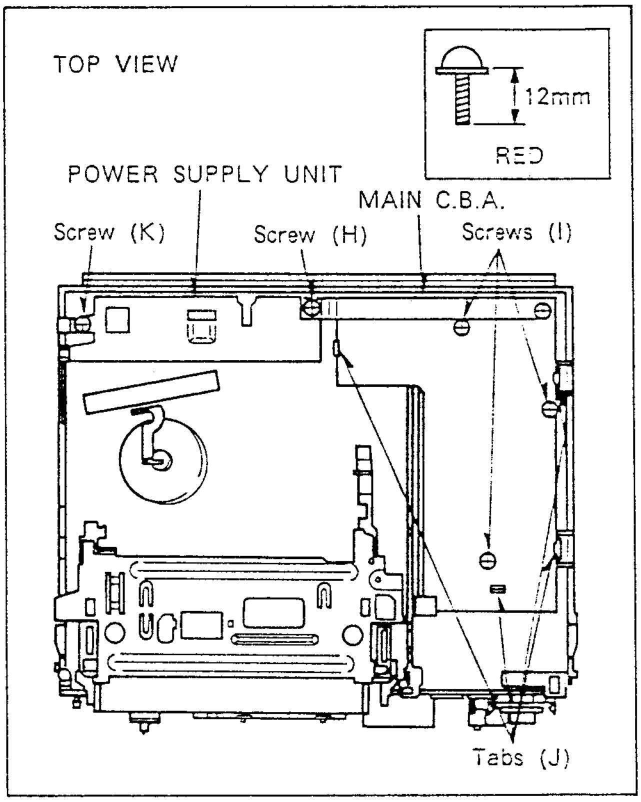

TOP VIEW
12mm
RED
POWER SUPPLY UNIT
MAIN C.B.A.
Screw (K)
Screw (H)
Screws (I)
Tabs (J)

Fig. D6

6. PACK SERVICING POSITION

CAUTION:
Confirm that the isolation between Mechanical Chassis and Main C.B.A. before connecting Main AC.

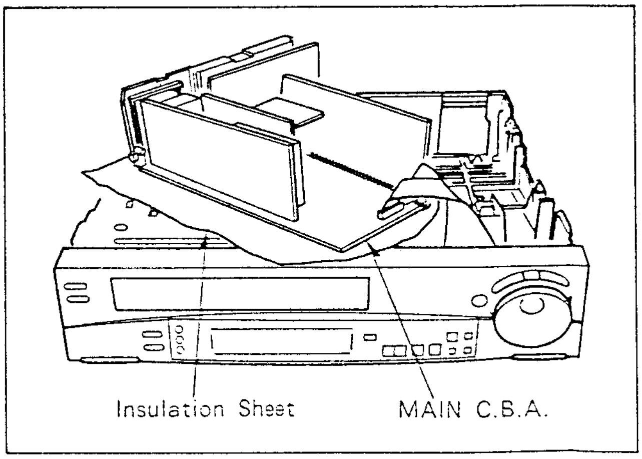

Insulation Sheet
MAIN C.B.A.

Fig. D7

7. REMOVAL OF THE CLEANER ARM UNIT

1. Unlock the locking portion(L).
2. Pull up the Cleaner Arm Unit.

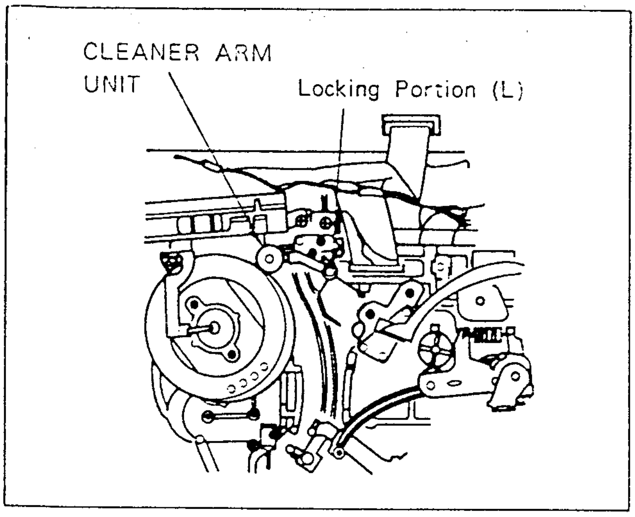


Fig. D8

2-2. SERVICE INFORMATION

2-2-1. REMOVAL OF THE CASSETTE

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

1) Remove the bottom plate.
2) Turn the WORM GEAR to "A" arrow mark direction by finger as shown in, Fig. S1, moving the LOADING POST to the unloaded position.
3) Turn the CAPSTAN clockwise to take up the tape.
4) Turn the WORM GEAR again to eject the cassette.

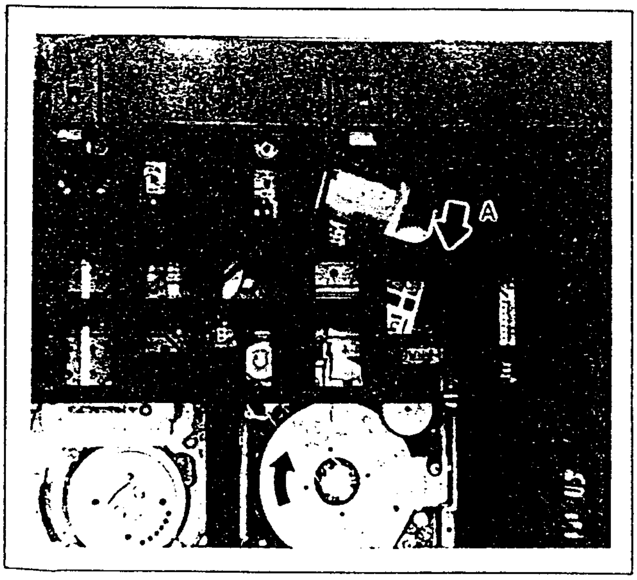


Fig. S1

2. BATTERY OPERATION

1) Connect the battery to P1503 as shown in Fig.S2.
2) After moving the LOADING POST to the unloaded position, disconnect the battery to stop the motor.
3) Turn the CAPSTAN to clockwise to take up the tape.
4) Reconnect the battery to eject the cassette.

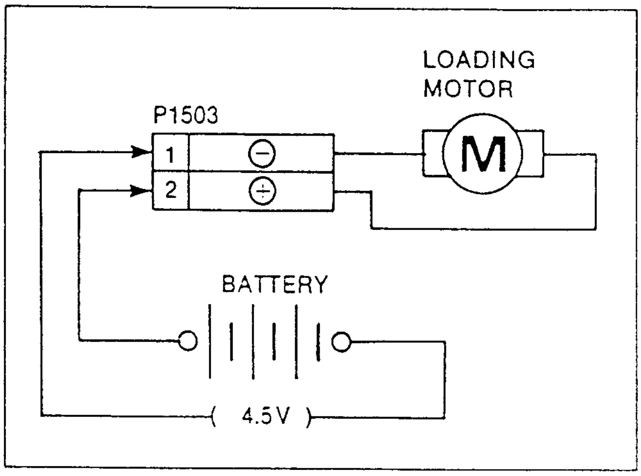


Fig. S2

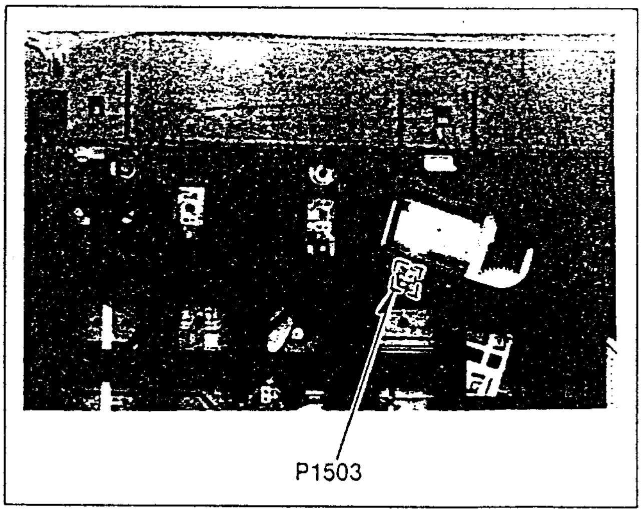


Fig. S3

2-3. MECHANICAL ADJUSTMENT PROCEDURES

2-3-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

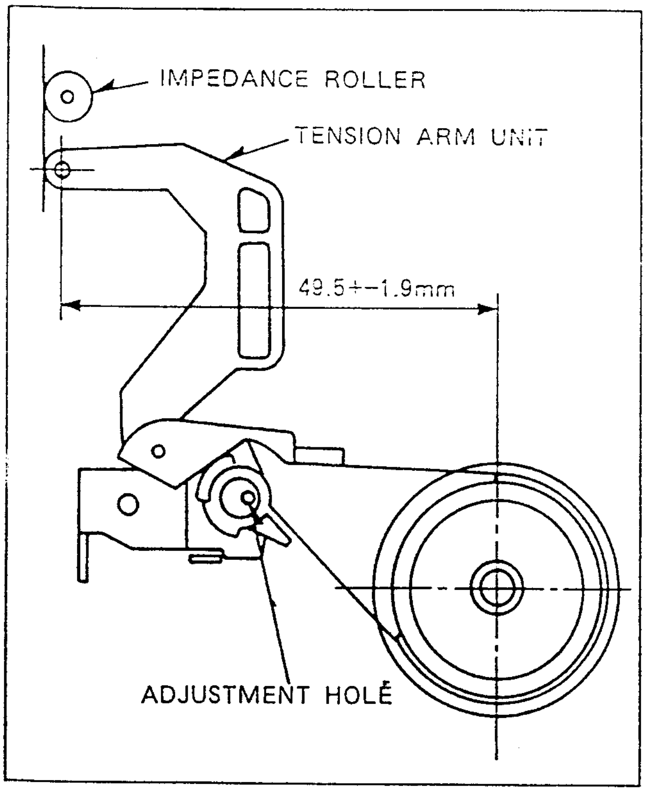


Fig. M1

2-3-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape:PAL)
(120 minutes tape:NTSC)

(Specification)
22.5~27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
(for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2.

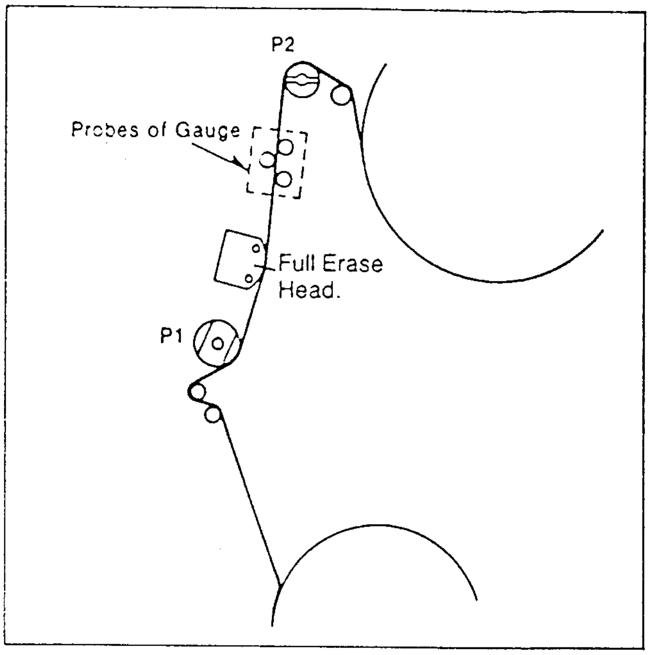


Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

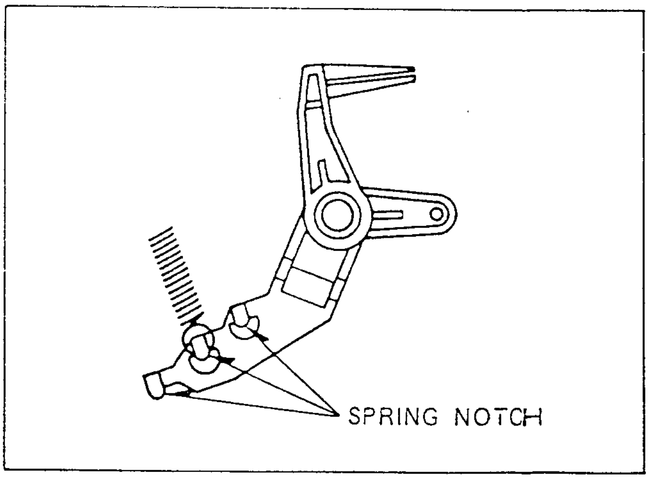


Fig. M3

2-3-3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

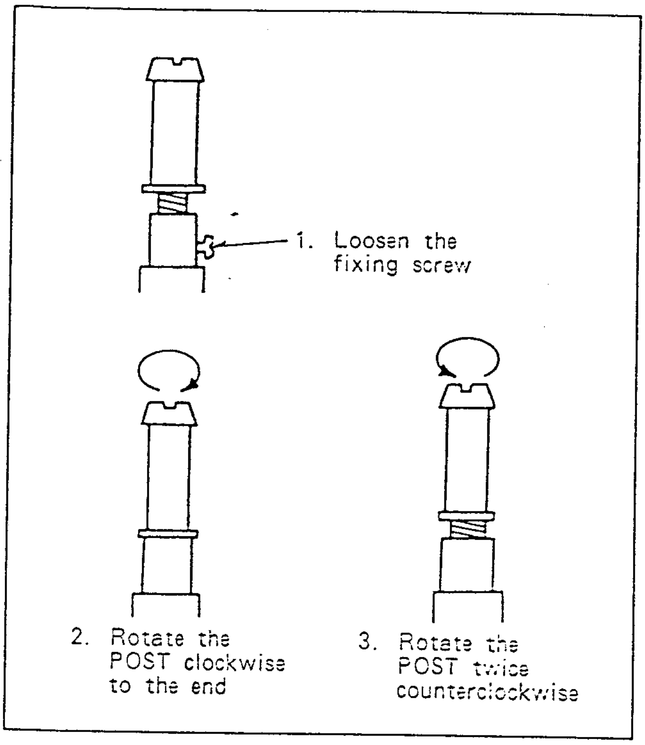

1. Loosen the fixing screw
2. Rotate the POST clockwise to the end
3. Rotate the POST twice counterclockwise

Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER.
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

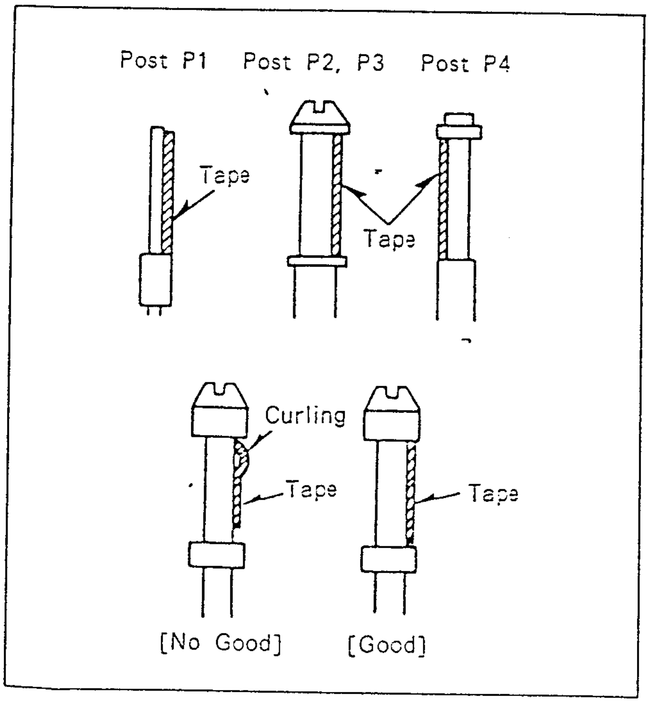

Post P1
Post P2, P3
Post P4
Tape
Tape
Curling
Tape
Tape
[No Good]
[Good]

Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-3-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Proceed the following procedures for Tape Interchangeability Adjustment to do it correctly and smoothly.

(1) Adjustment of P2 and P3 Posts.
(2) Height Adjustment of A/C Head (1).
(3) Height Adjustment of A/C Head (2).
(4) Fine-Adjustment of A/C Head
(5) Horizontal Position Adjustment of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, connect a Cut Jumper Wire as shown in Fig.M6.
(Auto Tracking is turned off.)

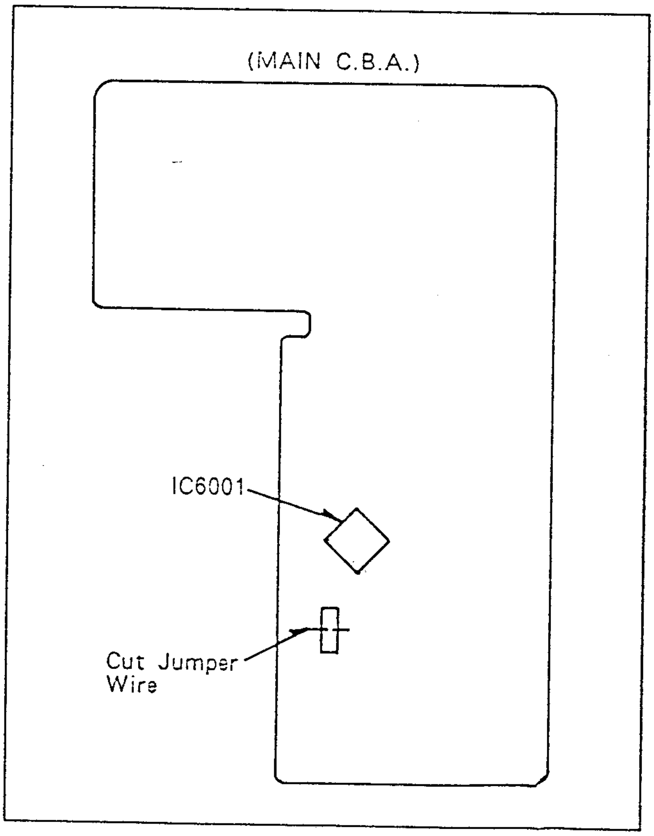

(MAIN C.B.A.)
IC6001
Cut Jumper Wire

Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape(PAL/SECAM: VFJ8125H3F,
NTSC: VFM8020HQFP)
Post Adjustment Screwdriver (VFK0329)

1. Set the tracking control into the fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
   And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:
To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

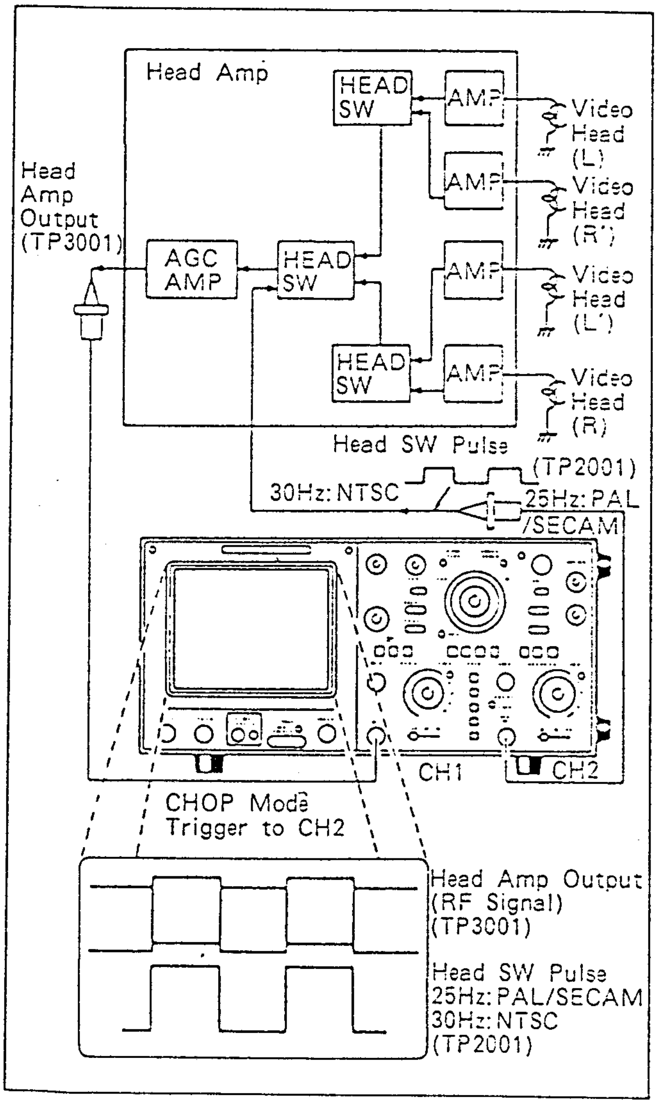

Head Amp
HEAD SW
AMP
Video Head (L)
Video Head (R')
Video Head (L')
Video Head (R)
Head Amp Output (TP3001)
AGC AMP
HEAD SW
Head SW Pulse
(TP2001)
30Hz:NTSC
25Hz:PAL /SECAM
CH1
CH2
CHOP Mode
Trigger to CH2
Head Amp Output (RF Signal) (TP3001)
Head SW Pulse 25Hz:PAL/SECAM 30Hz:NTSC (TP2001)

Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2: Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8−"C".

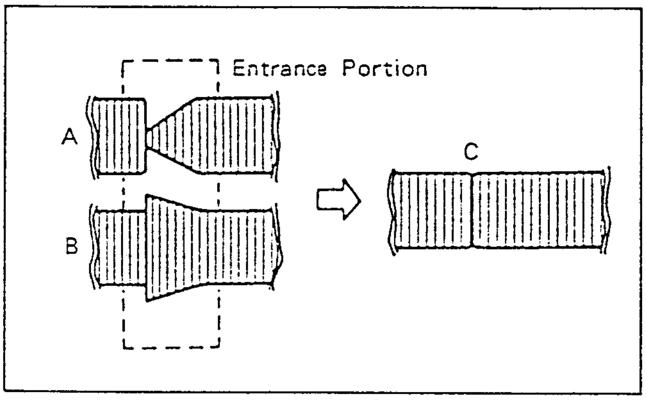

Entrance Portion
A
B
C

Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3: Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9−"F".

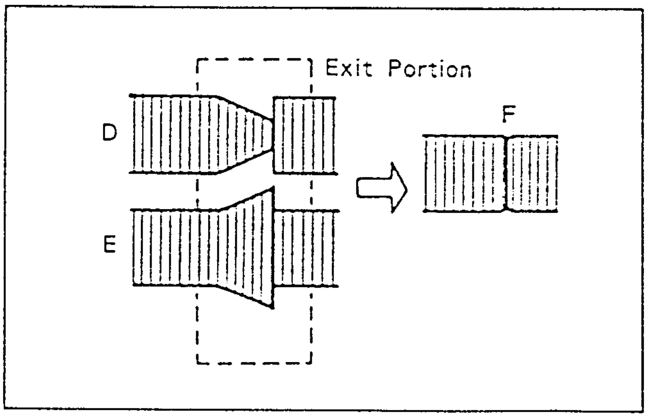

Exit Portion
D
E
F

Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or − button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope.
   If the RF envelope does not meet these specifications,
   V1/V>=0.7, V2/V>=0.8 (Refer to Fig.M12)
   then repeat steps 1−8 again.

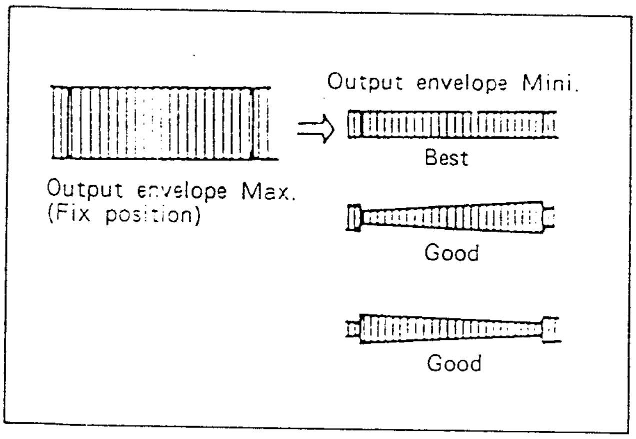

Output envelope Mini.
Best
Output envelope Max.
(Fix position)
Good
Good

Fig. M10

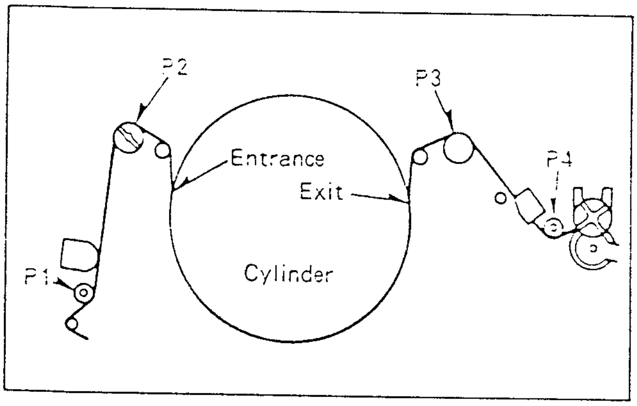

P2
P3
Entrance
Exit
P4
P1
Cylinder

Fig. M11 Loading of Posts

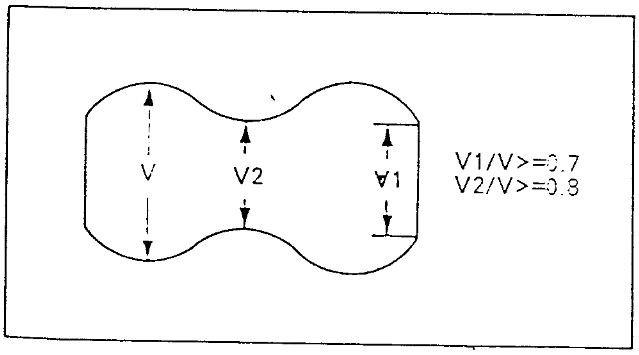

V
V2
V1
V1/V>=0.7
V2/V>=0.8

Fig. M12 Spec. of Envelope Figure

(2) Height Adjustment of A/C Head (1)

1) Install the A/C HEAD on the A/C HEAD BASE (E) by 3 screws (A),(B) and (C) with springs.
2) Tighten the screw (A) unit it touches chassis and then rotate the SCREW(A) counterclockwise for approx. 1.5 times.
3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE (D) and (E) is separate.

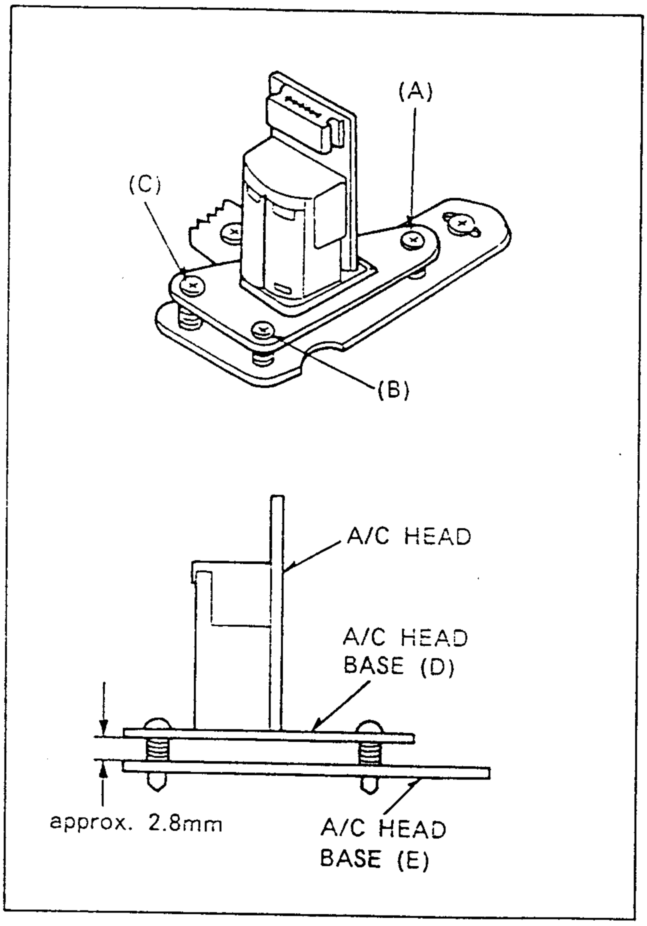
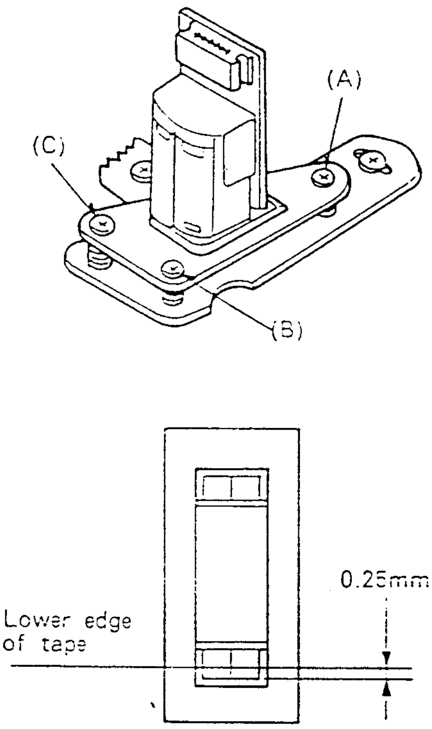

(A)
(C)
(B)
A/C HEAD
A/C HEAD BASE (D)
approx. 2.8mm
A/C HEAD BASE (E)

Fig. M13

(3) Height Adjustment of A/C Head (2)

1) Playback the alignment tape.
2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
4) Connect the oscilloscope to audio output terminal.
5) Rotate the screw (C) until audio signal is maximized.



	SCREW (A)	SCREW (B)
To appear the wrinkle on the lower edge of tape	COUNTER CLOCKWISE	CLOCKWISE
To disappear the wrinkle on the lower edge of tape	CLOCKWISE	COUNTER CLOCKWISE

Fig. M14

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

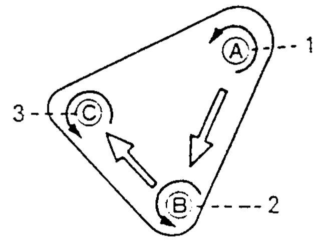


Fig. M15

<When moving the A/C HEAD down>

1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape at P4 post.
2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) clockwise until the audio signal is miximized.

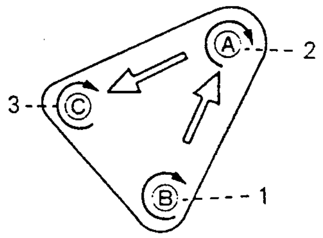


Fig. M16

7. REMOVAL OF THE CLEANER ARM UNIT

1. Unlock the locking portion(L).
2. Pull up the Cleaner Arm Unit.

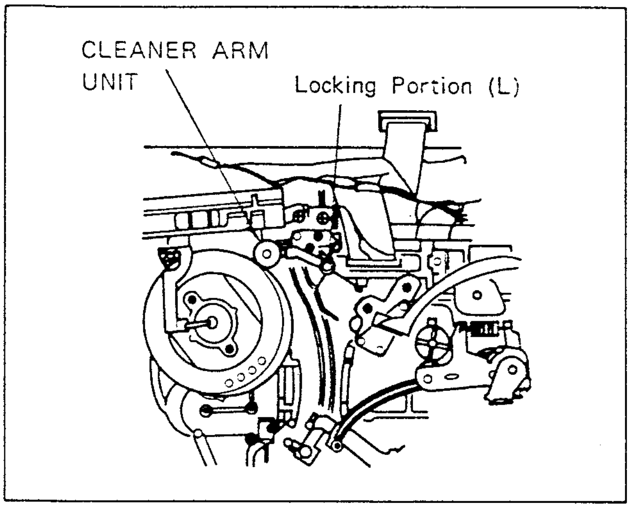


Fig. D8

2-2. SERVICE INFORMATION

2-2-1. REMOVAL OF THE CASSETTE

If the electrical circuit is defective and the action of unloading and front unloading do not work properly, it is possible to remove the cassette manually. There are 2 methods of removing the cassette.

1. HAND OPERATION

1) Remove the bottom plate.
2) Turn the WORM GEAR to "A" arrow mark direction by finger as shown in Fig. S1, moving the LOADING POST to the unloaded position.
3) Turn the CAPSTAN clockwise to take up the tape.
4) Turn the WORM GEAR again to eject the cassette.

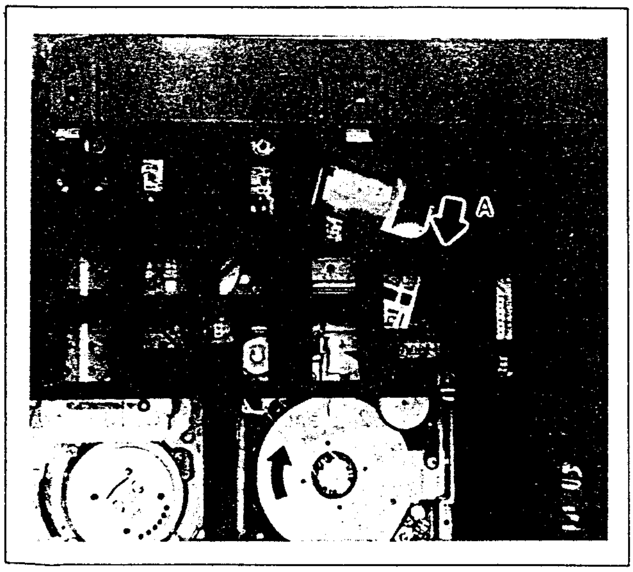


Fig. S1

2. BATTERY OPERATION

1) Connect the battery to P1503 as shown in Fig.S2.
2) After moving the LOADING POST to the unloaded position, disconnect the battery to stop the motor.
3) Turn the CAPSTAN to clockwise to take up the tape.
4) Reconnect the battery to eject the cassette.

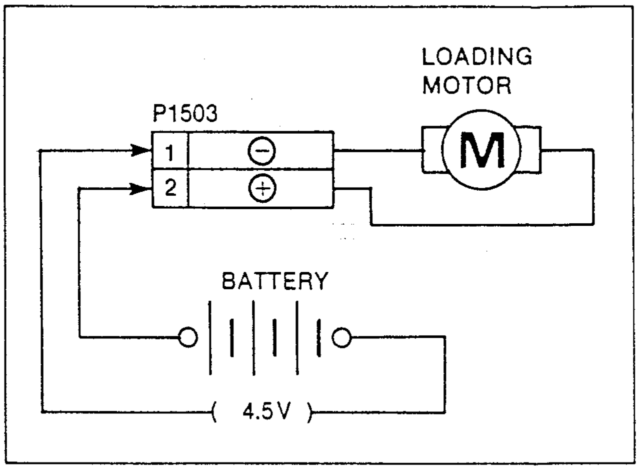


Fig. S2

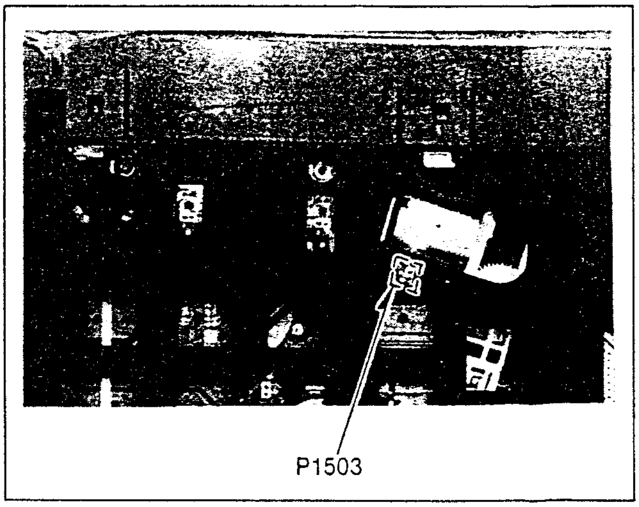


Fig. S3

2-3. MECHANICAL ADJUSTMENT PROCEDURES

2-3-1. TENSION POST POSITION ADJUSTMENT

(Equipment Required)
Hex Wrench (VFK0326)

1. Disconnect the AC plug.
2. Remove the TOP PLATE and CASSETTE HOLDER.
3. Turn the LOADING MOTOR until the loading completes.
4. Adjust the hole of TENSION BAND FASTENER by hex wrench so that the left edge of IMPEDANCE ROLLER and TENSION ARM UNIT as shown in Fig.M1.

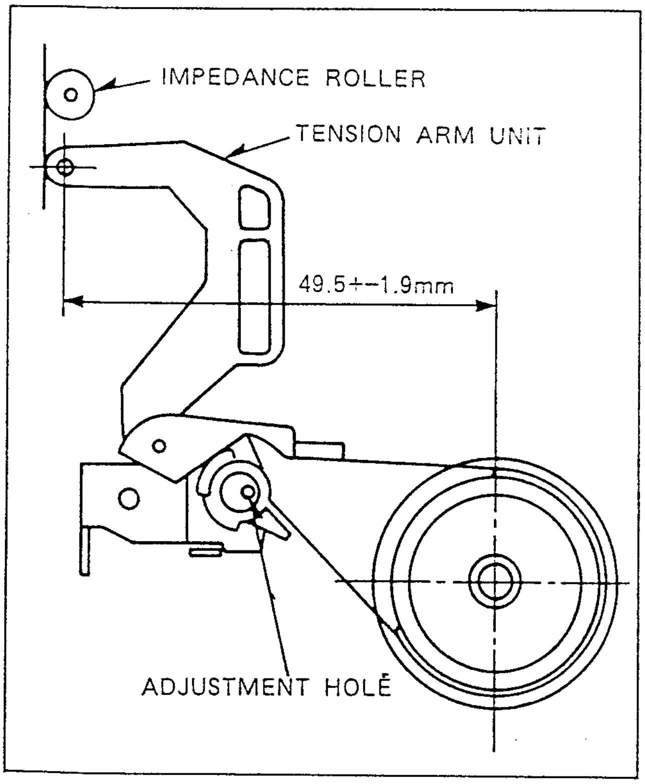


Fig. M1

2-3-2. BACK TENSION ADJUSTMENT

(Equipment Required)
Back Tension Meter (VFK0132)
VHS Cassette Tape (180 minutes tape: PAL)
(120 minutes tape: NTSC)

(Specification)
22.5-27.5g

1. Playback the cassette tape from the beginning and wait until the tape movement get the stabilization.
   (for approx. 10~20 seconds)
2. Insert the Back tension Meter into the path of a tape, and measure the back tension to be within specification as shown in Fig.M2.

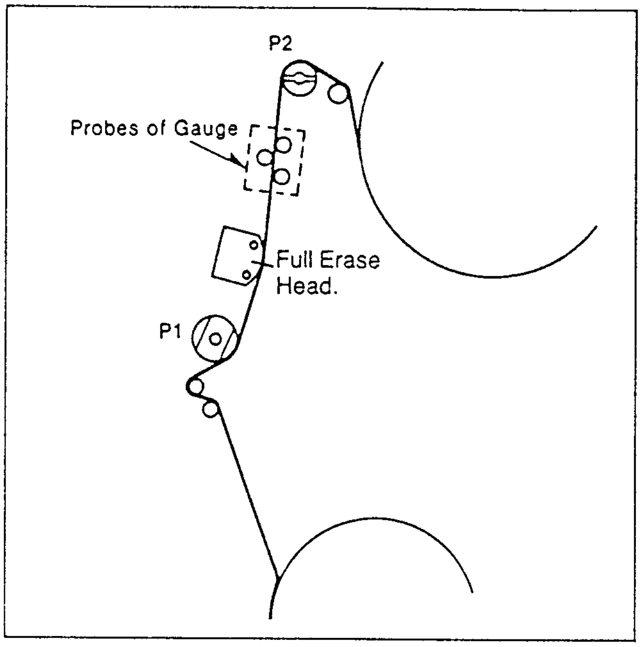


Fig. M2

3. If it is out of specification, change the spring notch as shown in Fig.M3.

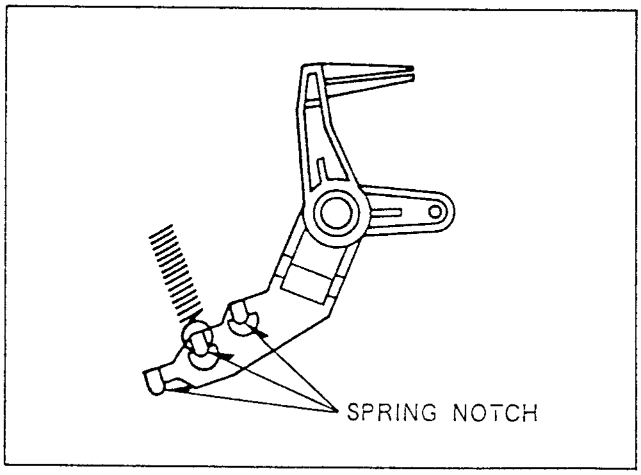


Fig. M3

2-3-3. P2 AND P3 POSTS ADJUSTMENT (PREADJUSTMENT)

(Equipment Required)
Post Adjustment Screwdriver (VFK0329)

1. Remove the TOP PLATE and CASSETTE HOLDER.
2. Turn the LOADING MOTOR until the unloading completes.
3. Loosen the fixing screw of P2 and P3 POSTS.
4. Rotate the P2 and P3 POSTS clockwise to the end.
5. Rotate the P2 and P3 POSTS twice counterclockwise.

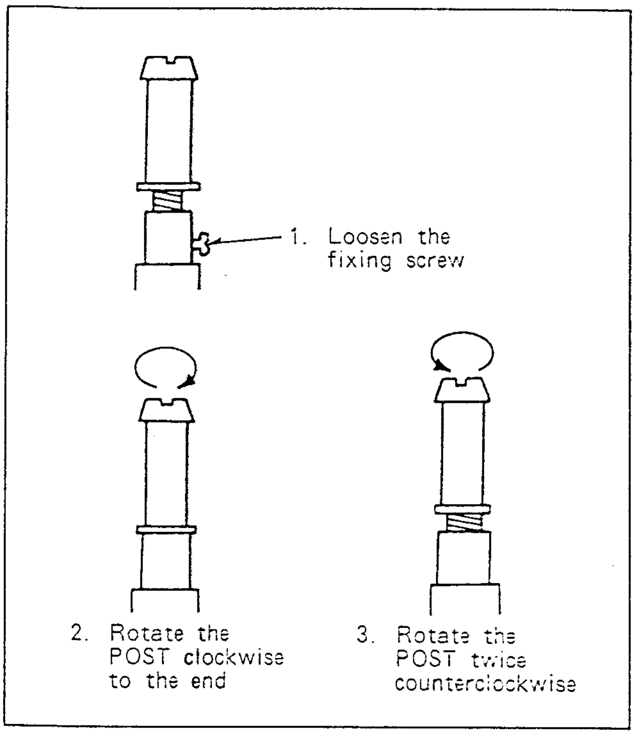

1. Loosen the fixing screw
2. Rotate the POST clockwise to the end
3. Rotate the POST twice counterclockwise

Fig. M4

6. Install the TOP PLATE and CASSETTE HOLDER.
7. Playback the cassette tape and make sure that the edges of the tape are not curling at the bottom or top end of the P1, P2, P3 and P4 POSTS as shown in Fig.M5.

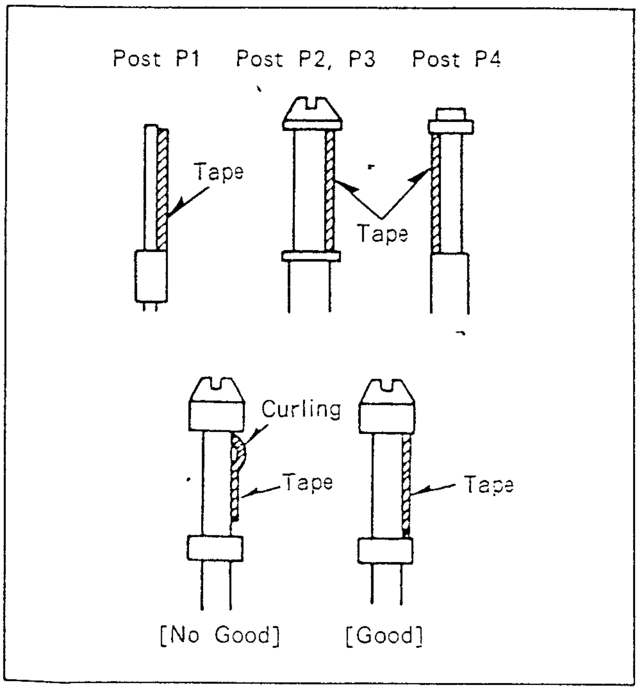

Post P1
Post P2, P3
Post P4
Tape
Tape
Curling
Tape
Tape
[No Good]
[Good]

Fig. M5

8. If curling appears, readjusts the P2 and P3 POSTS.

2-3-4. TAPE INTERCHANGEABILITY ADJUSTMENT

Proceed the following procedures for Tape Interchangeability Adjustment to do it correctly and smoothly.

(1) Adjustment of P2 and P3 Posts.
(2) Height Adjustment of A/C Head (1).
(3) Height Adjustment of A/C Head (2).
(4) Fine-Adjustment of A/C Head
(5) Horizontal Position Adjustment of A/C Head.

If the Tape Interchangeability Adjustment is not perfect, repeat the above procedures from (1) to (5).

CAUTIONS:

To make a Adjustment Mode for Tape Interchangeability, connect a Cut Jumper Wire as shown in Fig.M6.
(Auto Tracking is turned off.)

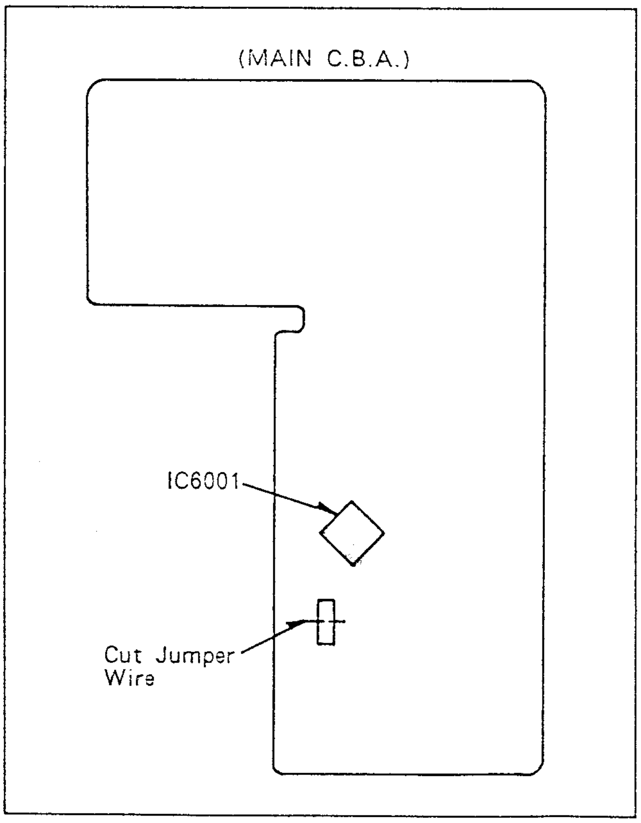

(MAIN C.B.A.)
IC6001
Cut Jumper Wire

Fig. M6

(1) Adjustment of P2 and P3 Posts

(Equipment Required)
Alignment Tape(PAL/SECAM: VFJ8125H3F,
NTSC: VFM8080HQFP)
Post Adjustment Screwdriver (VFK0329)

1. Set the tracking control into the fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
   And connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.

Note:
To get a stable waveform of the Head Amp output on the oscilloscope, use the head switching pulse as a triggering signal as shown in Fig.M7.

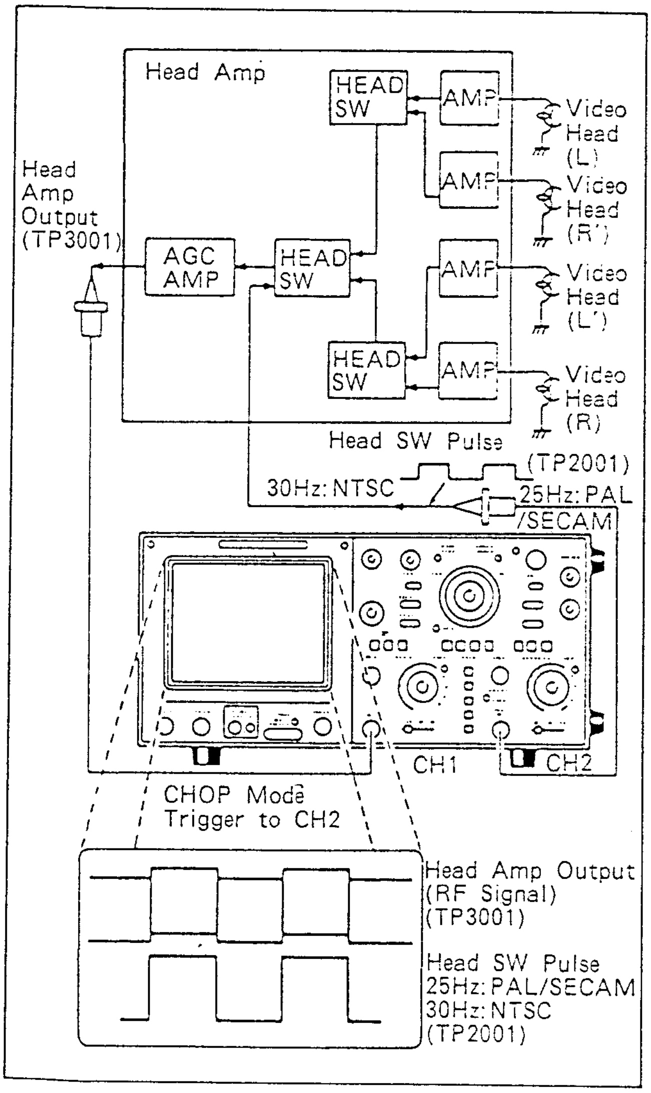

Head Amp
HEAD SW
AMP
AMP
AMP
AMP
Video Head (L)
Video Head (R')
Video Head (L')
Video Head (R)
Head Amp Output (TP3001)
AGC AMP
HEAD SW
HEAD SW
Head SW Pulse
(TP2001)
30Hz: NTSC
25Hz: PAL /SECAM
CH1
CH2
CHOP Mode
Trigger to CH2
Head Amp Output (RF Signal) (TP3001)
Head SW Pulse 25Hz: PAL/SECAM 30Hz: NTSC (TP2001)

Fig. M7 Connect of Oscilloscope

2. Playback the alignment tape.
3. If the RF envelope appears like example "A" or "B" in Fig.M8 then adjustment of the tape guide post (P2: Entrance) is necessary.
4. Adjust the tape guide post (P2) with the post adjustment screwdriver so that the RF envelope waveform at the entrance portion becomes flat as shown in Fig.M8-"C".

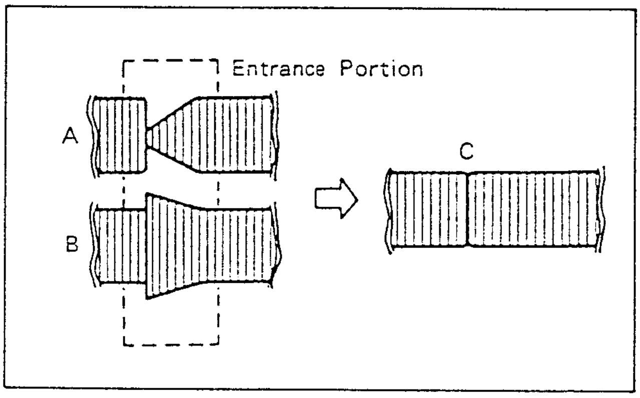

Entrance Portion
A
B
C

Fig. M8

5. If the RF envelope appears like example "D" or "E" in Fig.M9, then adjustment of the tape guide post (P3: Exit) is necessary.
6. Adjust the tape guide post (P3) in the same manner as the P2 post so that the exit portion becomes flat as shown in Fig.M9-"F".

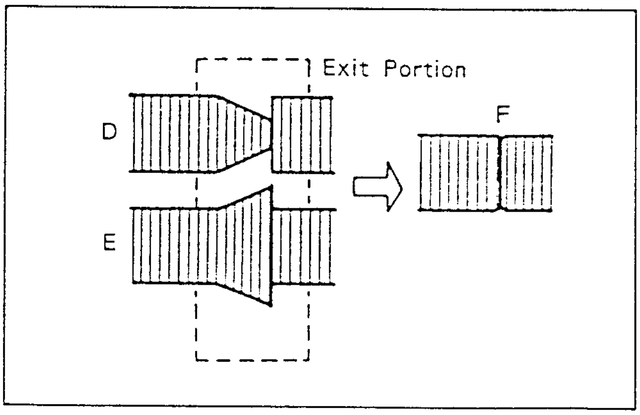

Exit Portion
D
E
F

Fig. M9

7. Turn the Tracking VR fully clockwise and counter clockwise. (Keep pressing + button or − button on the Remote Controller) The output envelope should vary nearly parallel with other condition as shown in Fig.M10.
8. Set the tracking control into centre fix position and adjust for maximum RF envelope.
   If the RF envelope does not meet these specifications,
   V1/V>=0.7, V2/V>=0.8 (Refer to Fig.M12)
   then repeat steps 1-8 again.

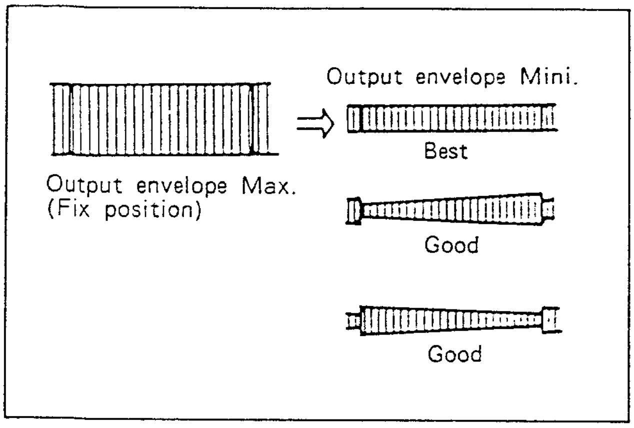

Output envelope Mini.
Output envelope Max.
(Fix position)
Best
Good
Good

Fig. M10

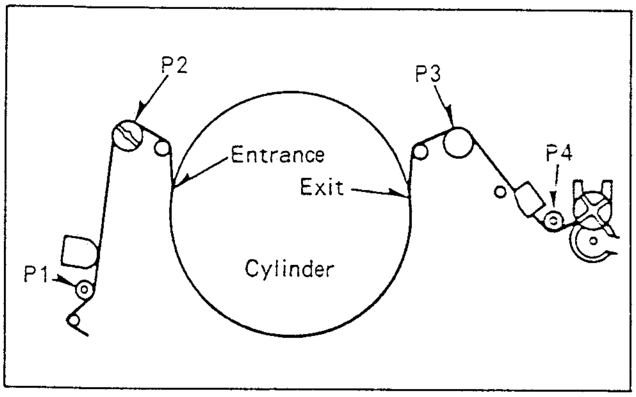

P2
P3
Entrance
P4
Exit
Cylinder
P1

Fig. M11 Loading of Posts

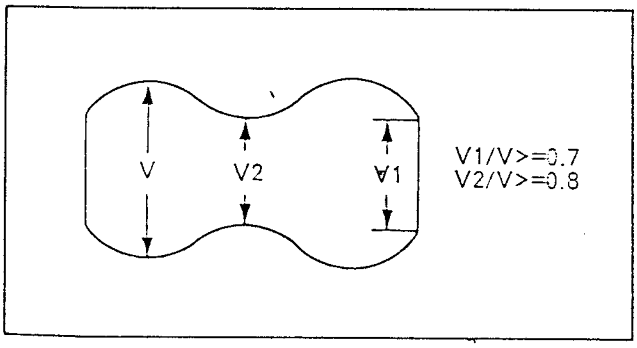

V
V2
V1
V1/V>=0.7
V2/V>=0.8

Fig. M12 Spec. of Envelope Figure

(2) Height Adjustment of A/C Head (1)

1) Install the A/C HEAD on the A/C HEAD BASE (E) by 3 screws (A),(B) and (C) with springs.
2) Tighten the screw (A) unit it touches chassis and then rotate the SCREW(A) counterclockwise for approx. 1.5 times.
3) Rotate the 2 screws(B) and (C) until A/C HEAD BASE (D) and (E) is separate.

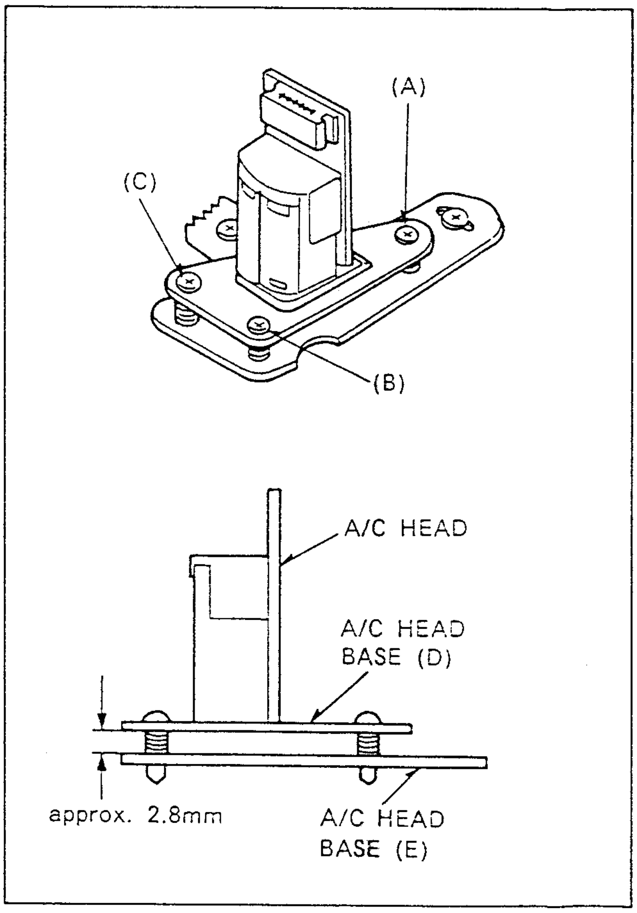
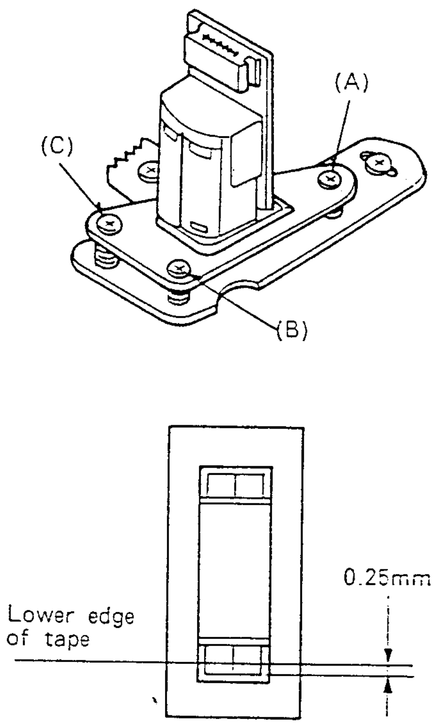

(A)
(C)
(B)
A/C HEAD
A/C HEAD
BASE (D)
approx. 2.8mm
A/C HEAD
BASE (E)

Fig. M13

(3) Height Adjustment of A/C Head (2)

1) Playback the alignment tape.
2) Rotate the screw (A) or (B) until the wrinkle appears on the lower edge of tape at P4 post.
3) Rotate the screw (A) or (B) until the wrinkle just disappears on the lower edge of tape at P4 post.
4) Connect the oscilloscope to audio output terminal.
5) Rotate the screw (C) until audio signal is maximized.



	SCREW (A)	SCREW (B)
To appear the wrinkle on the lower edge of tape	COUNTER CLOCKWISE	CLOCKWISE
To disappear the wrinkle on the lower edge of tape	CLOCKWISE	COUNTER CLOCKWISE

Fig. M14

(4) Fine-Adjustment of A/C HEAD

<When moving the A/C HEAD up>

1) Rotate the screw (A) counterclockwise until the wrinkle appears on the lower edge of tape at P4 post.
2) Rotate the screw (B) counterclockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) counterclockwise until the audio signal is maximized.

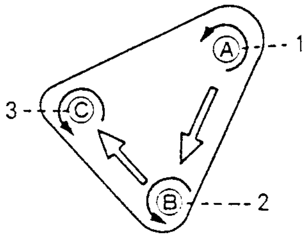


Fig. M15

<When moving the A/C HEAD down>

1) Rotate the screw (B) clockwise until the wrinkle appears on the lower edge of tape a P4 post.
2) Rotate the screw (A) clockwise until the wrinkle just disappears on the lower edge of tape at P4 post.
3) Rotate the screw (C) clockwise until the audio signal is miximized.

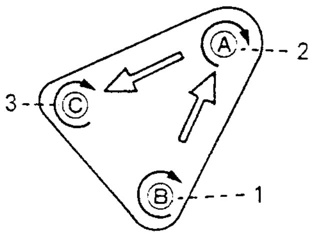


Fig. M16

(5) Horizontal Position Adjustment of A/C HEAD

1) Set the tracking control into the centre fix position. (by pressing the tracking (+) and (−) button simultaneously on the Remote Controller)
2) Connect the oscilloscope to the output of the Head Amp as shown in Fig.M7.
3) Playback the alignment tape.
4) Loosen the 2 screws (F) and (G).
5) Adjust the A/C HEAD BASE (E) until the RF envelope waveform is maximized.

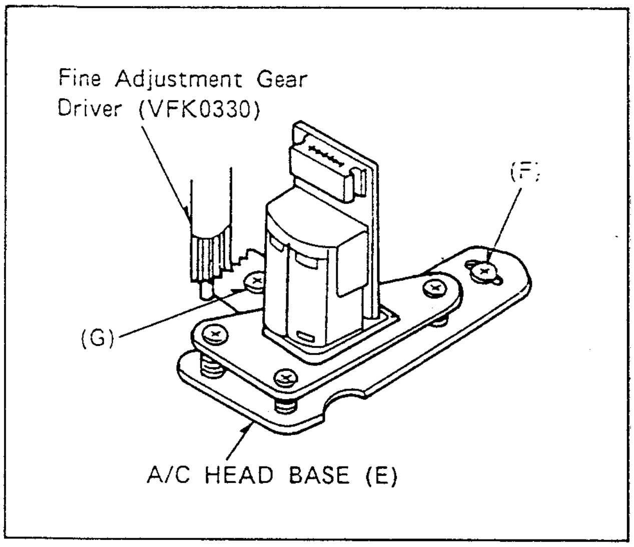

Fine Adjustment Gear
Driver (VFK0330)
(F)
(G)
A/C HEAD BASE (E)

Fig. M17

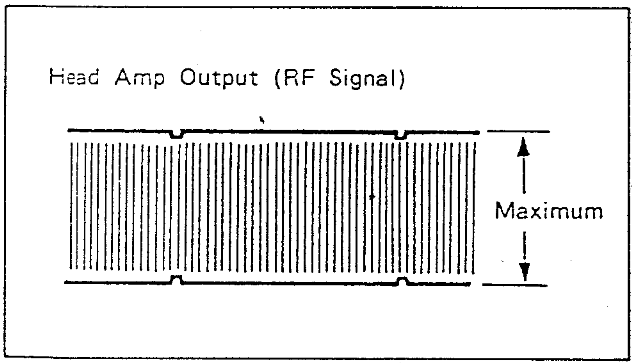
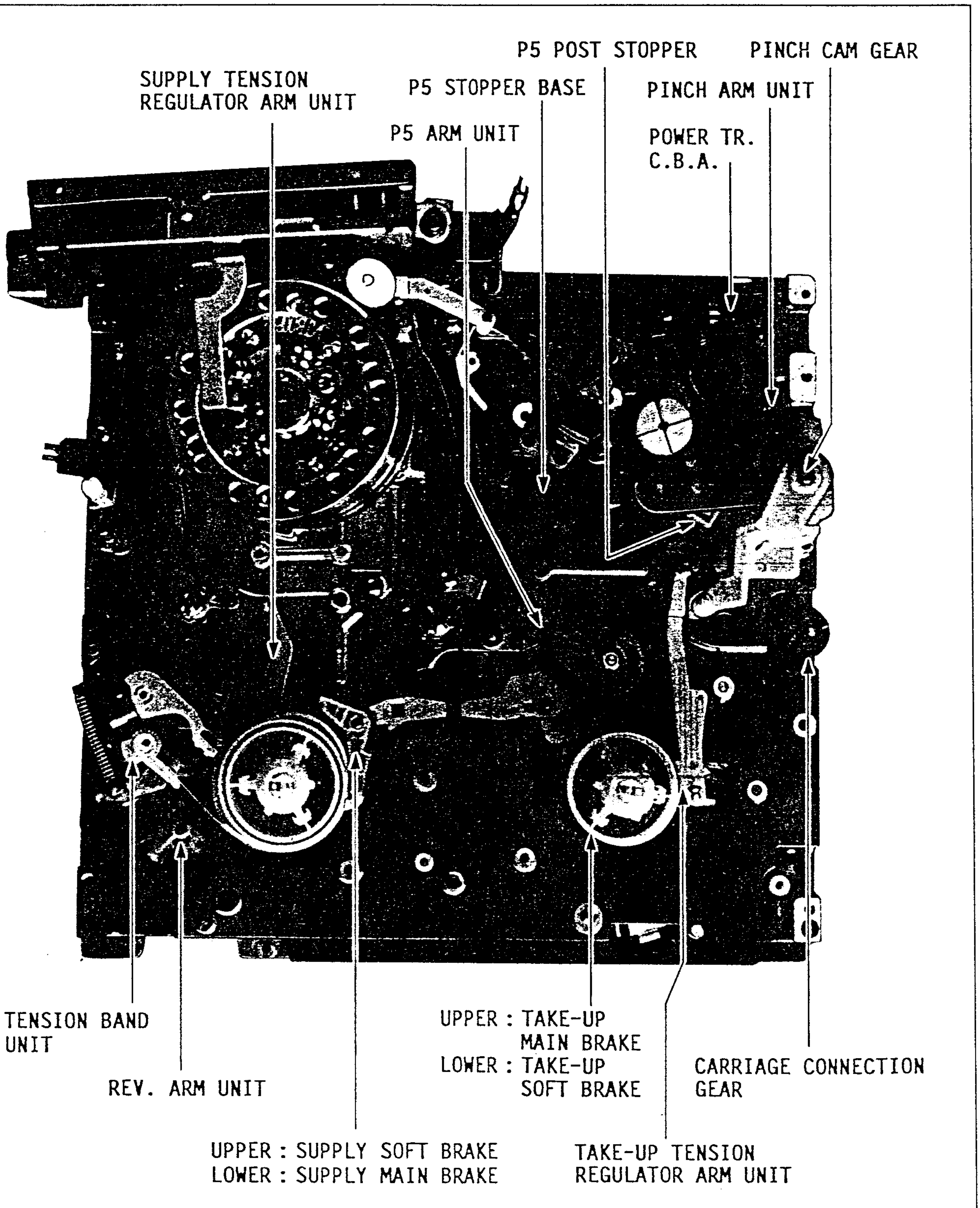


Fig. M18

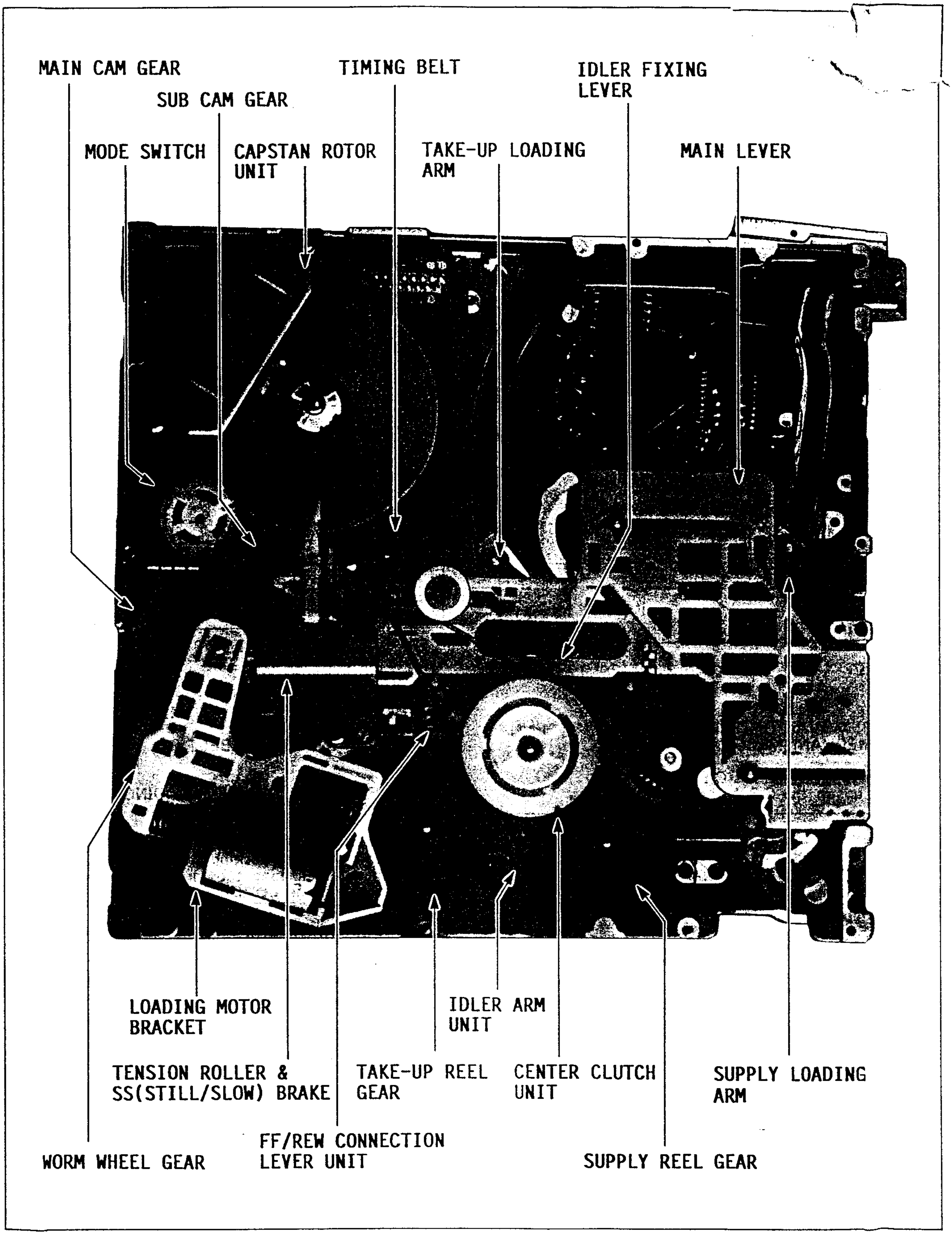
2-4. DISASSEMBLY PROCEDURES OF MECHANISM

In order to remove the mechanism components it is first necessary to remove the mechanism chassis.

[K Mechanism Component]


P5 POST STOPPER
PINCH CAM GEAR
SUPPLY TENSION REGULATOR ARM UNIT
P5 STOPPER BASE
PINCH ARM UNIT
P5 ARM UNIT
POWER TR. C.B.A.
TENSION BAND UNIT
REV. ARM UNIT
UPPER : TAKE-UP MAIN BRAKE
LOWER : TAKE-UP SOFT BRAKE
CARRIAGE CONNECTION GEAR
UPPER : SUPPLY SOFT BRAKE
LOWER : SUPPLY MAIN BRAKE
TAKE-UP TENSION REGULATOR ARM UNIT

Top View of K Mechanism


MAIN CAM GEAR
TIMING BELT
IDLER FIXING LEVER
SUB CAM GEAR
MODE SWITCH
CAPSTAN ROTOR UNIT
TAKE-UP LOADING ARM
MAIN LEVER
LOADING MOTOR BRACKET
IDLER ARM UNIT
TENSION ROLLER & SS(STILL/SLOW) BRAKE
TAKE-UP REEL GEAR
CENTER CLUTCH UNIT
SUPPLY LOADING ARM
FF/REW CONNECTION LEVER UNIT
WORM WHEEL GEAR
SUPPLY REEL GEAR

Bottom View of K Mechanism

2-4-1. REMOVAL OF THE MECHANISM CHASSIS

1) Remove the 2 screws(A) push the HOLDER PLATE slightly to the rear side.
2) Remove the screw(B).
3) Disconnect all cables and connectors on the mechanism chassis and connector P6003 on the MAIN C.B.A. (connecting to DEW SENSOR). (Use extreme care when disconnecting the P1506.)
4) Lift the mechanism chassis out of the unit.

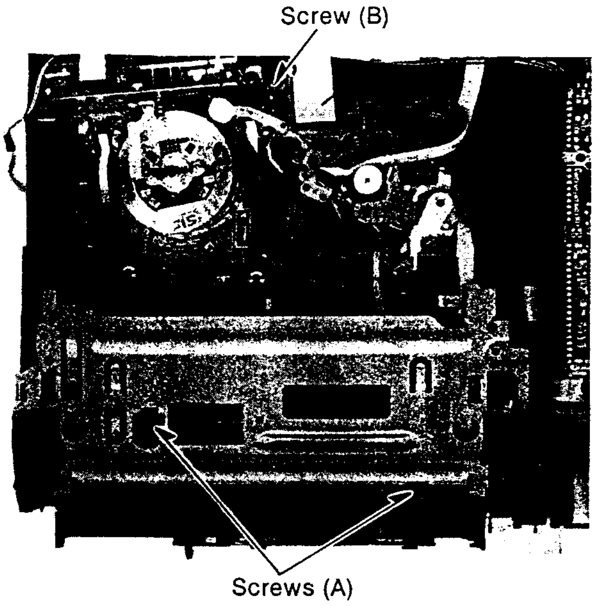

Screw (B)
Screws (A)

Fig. A1

2-4-2. REMOVAL OF THE MECHANISM CONNECTION C.B.A.

1) Remove the 4 screws(C).
2) Lift up on the C.B.A.

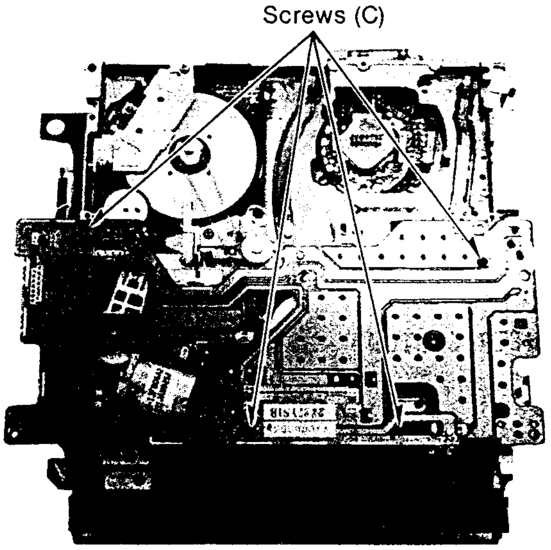


Fig. A2

2-4-3. REMOVAL OF THE TENSION ROLLER AND SS BRAKE

1) Remove the 2 screws(D).
2) Remove the TENSION ROLLER and the SS BRAKE.

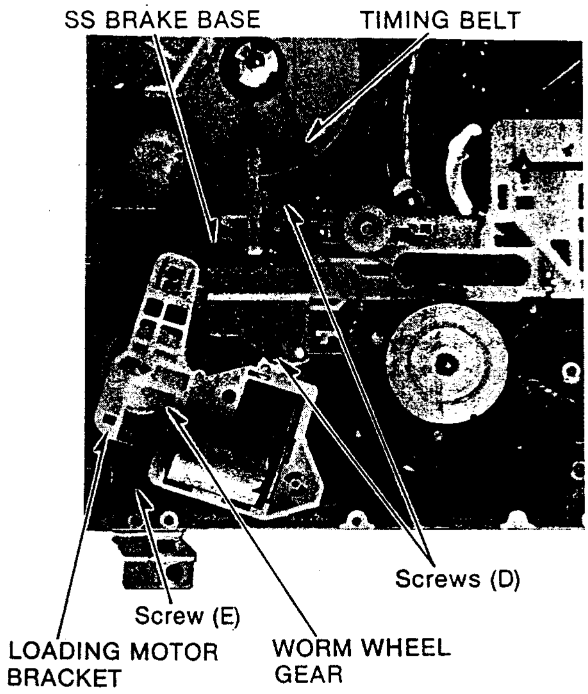

SS BRAKE BASE
TIMING BELT
Screws (D)
Screw (E)
LOADING MOTOR BRACKET
WORM WHEEL GEAR

Fig. A3

2-4-4. REMOVAL OF THE TIMING BELT

1) Remove the TIMING BELT.

2-4-5. REMOVAL OF THE LOADING MOTOR BRACKET

1) Remove the screw(E) as shown in Fig.A3.
2) Disconnect the locking tab on the right by pushing the locking tab in as shown in Fig.A4.
3) Lift up on the LOADING MOTOR BRACKET and push the BRACKET towards the MAIN CAM GEAR as shown in Fig.A3.
4) Lift the WORM WHEEL GEAR off the shaft.

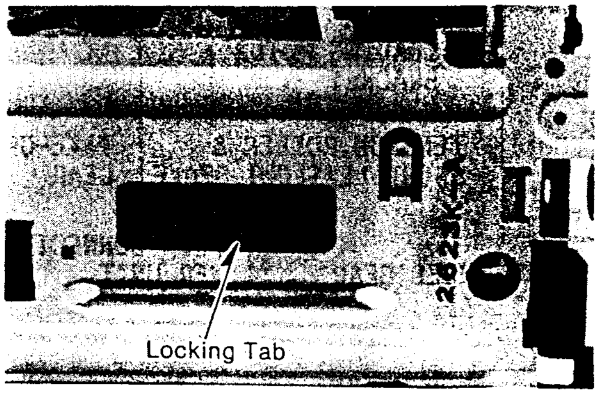

Locking Tab

Fig. A4

2-4-6. REMOVAL OF THE MAIN LEVEL UNIT

1) Remove the 2 cut washers.
2) Remove the MAIN LEVER UNIT.

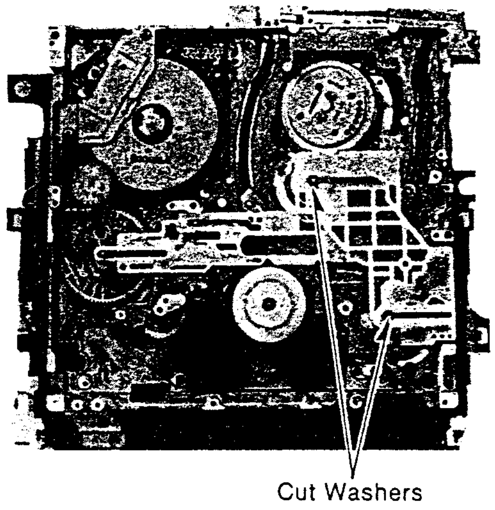

Cut Washers

Fig. A5

2-4-7. REMOVAL OF THE TAKE-UP AND SUPPLY LOADING ARMS

1) Remove the TAKE-UP and SUPPLY LOADING GEARs by lifting them up off the post.

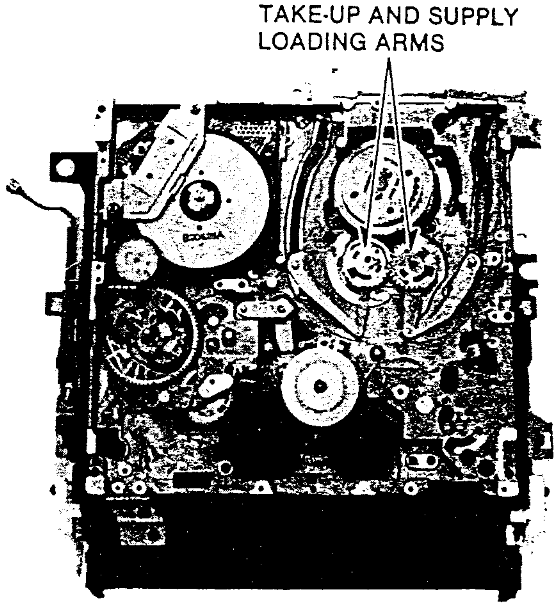

TAKE-UP AND SUPPLY
LOADING ARMS

Fig. A6

2-4-8. REMOVAL OF THE MODE SWITCH

1) Remove screw(F).
2) Remove the MODE SWITCH.

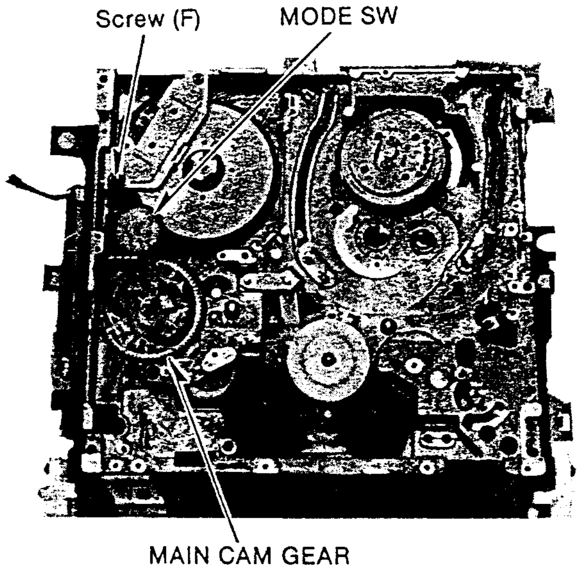

Screw (F)
MODE SW
MAIN CAM GEAR

Fig. A7

2-4-9. REMOVAL OF THE MAIN CAM GEAR

1) Lift the MAIN CAM GEAR off the shaft.

2-4-10. REMOVAL OF THE CAPSTAN ROTOR UNIT

1) Remove the screw(G) and remove the CAPSTAN STOPPER as shown in Fig.A8.

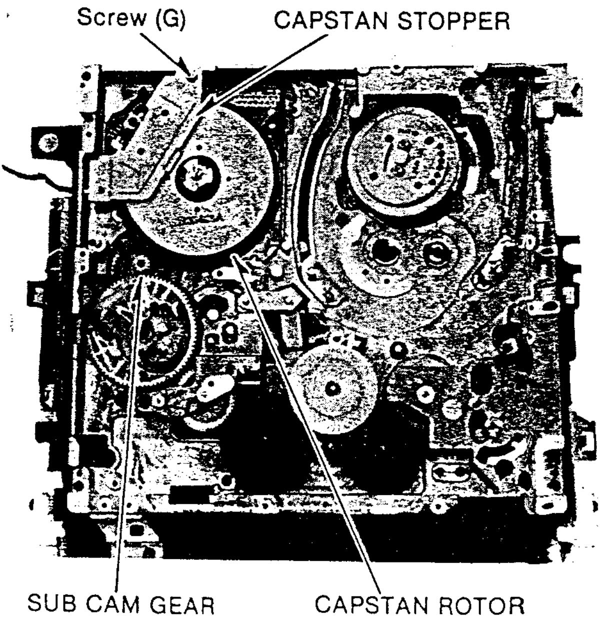

Screw (G)
CAPSTAN STOPPER
SUB CAM GEAR
CAPSTAN ROTOR

Fig. A8

2) Pull out the CAPSTAN ROTOR.
(When the CAPSTAN ROTOR is removed, 2 OIL SEALs are left in the CAPSTAN ROTOR HOUSING Fig.A9.. To avoid losing the OIL SEALs, place them back on the CAPSTAN SHAFT.)

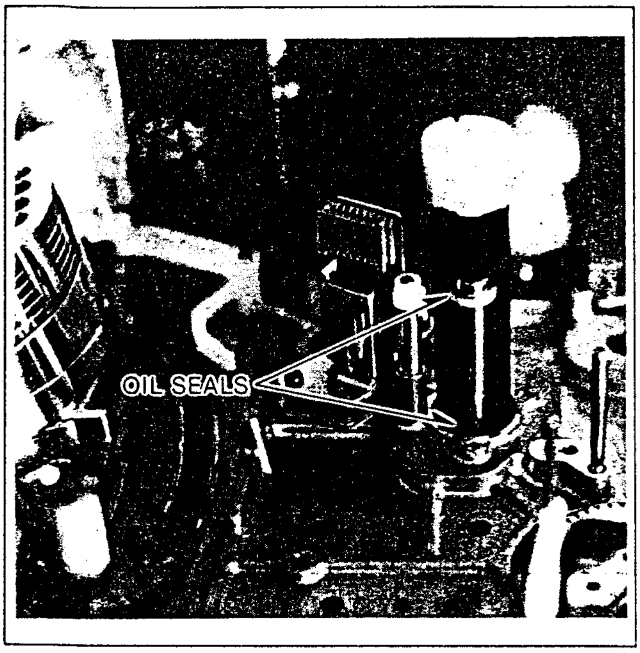


Fig. A9

3) Remove the 3 screws(H) and remove the CAPSTAN STATOR as shown in Fig.A10.

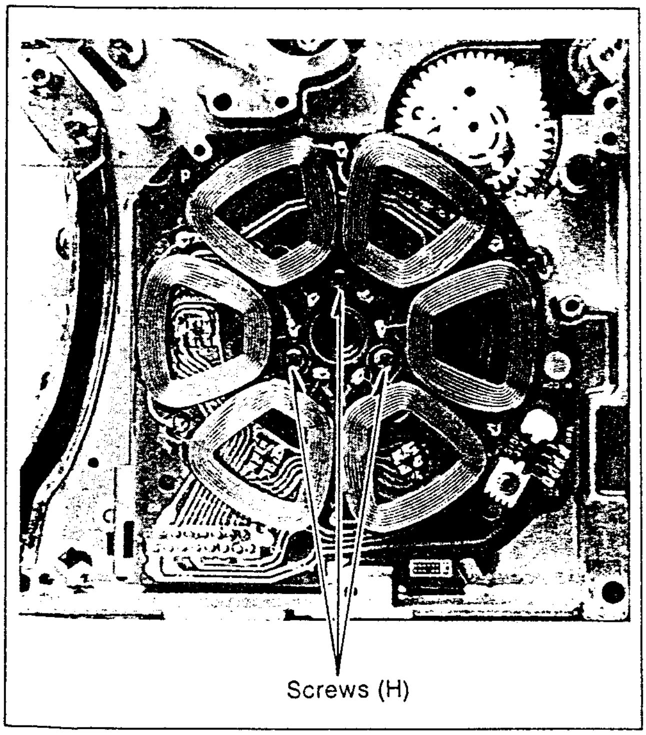


Fig. A10

2-4-11. REMOVAL OF THE SUB CAM GEAR

1) Lift the SUB CAM GEAR off the shaft.

2-4-12. REMOVAL OF THE CENTRE CLUTCH

1) Remove the cut washer.
2) Remove the CENTRE CLUTCH.

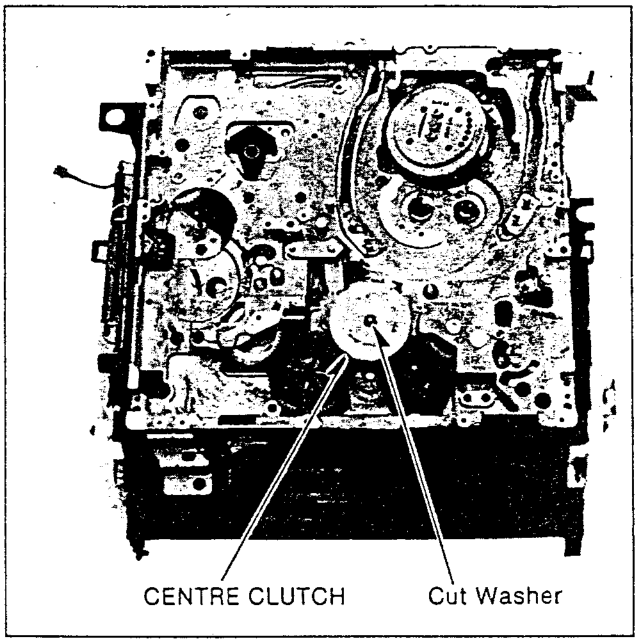

CENTRE CLUTCH
Cut Washer

Fig. A11

2-4-13. REMOVAL OF THE TAKE-UP AND SUPPLY REEL GEARs

1) Unlock the locking tab and lift up on the reel.

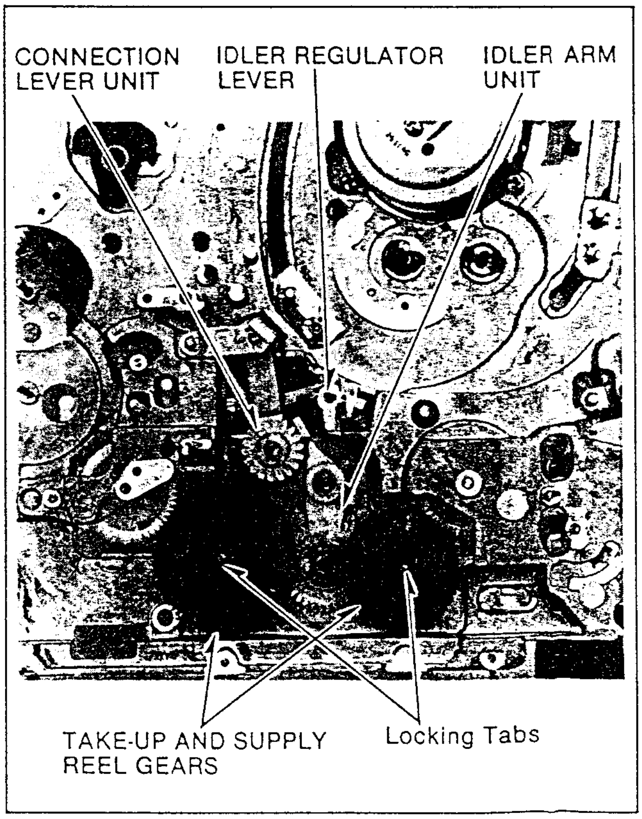

CONNECTION LEVER UNIT
IDLER REGULATOR LEVER
IDLER ARM UNIT
TAKE-UP AND SUPPLY REEL GEARS
Locking Tabs

Fig. A12

2-4-14. REMOVAL OF THE IDLER ARM UNIT, CONNECTION LEVER UNIT AND IDLER REGULATOR LEVER

1) Lift the IDLER ARM UNIT and CONNECTION LEVER UNIT off the shaft.
2) Remove the IDLER REGULATOR LEVER.

2-4-15. REMOVAL OF THE TOP PLATE

1) Push the locking tabs from the outer side to inside as shown in Fig.A13.
2) Lift up on the TOP PLATE.

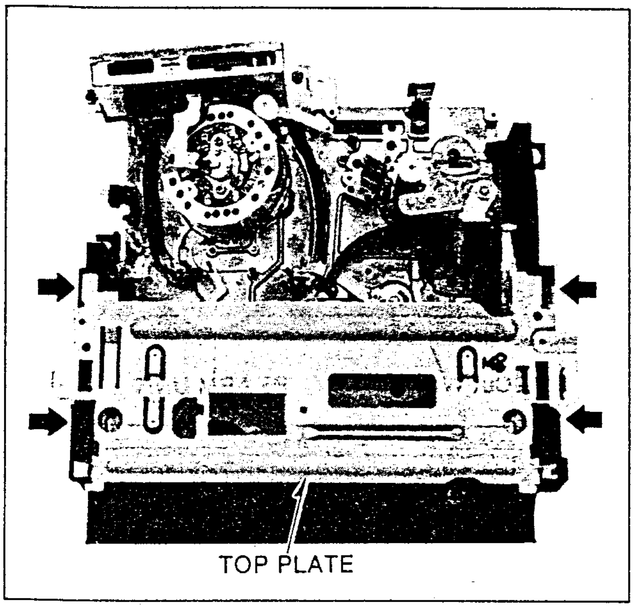


Fig. A13

NOTE:

If locking tab is broken, TOP PLATE can be installed by screws(XTB26+8G) as shown in Fig.A14.

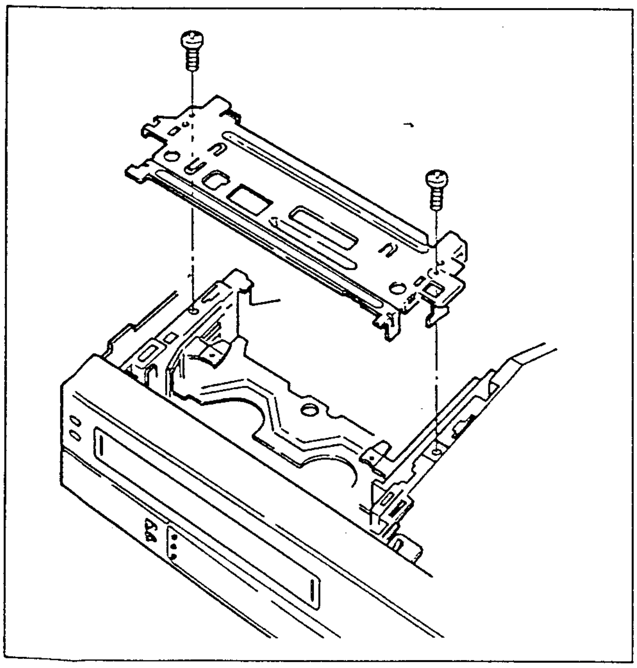


Fig. A14

2-4-16. REMOVAL OF THE CASSETTE HOLDER

1) Slide the HOLDER PLATE in the rear and lift up.
2) Remove the 4 screws(I).
3) Remove the CASSETTE HOLDER.

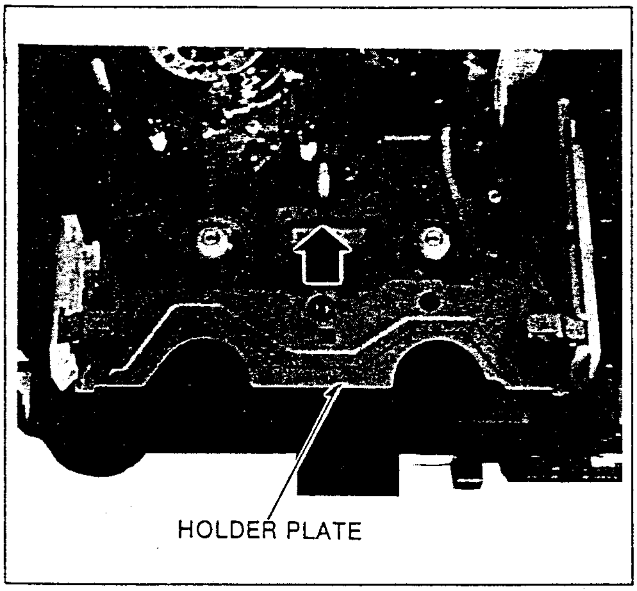


Fig. A15

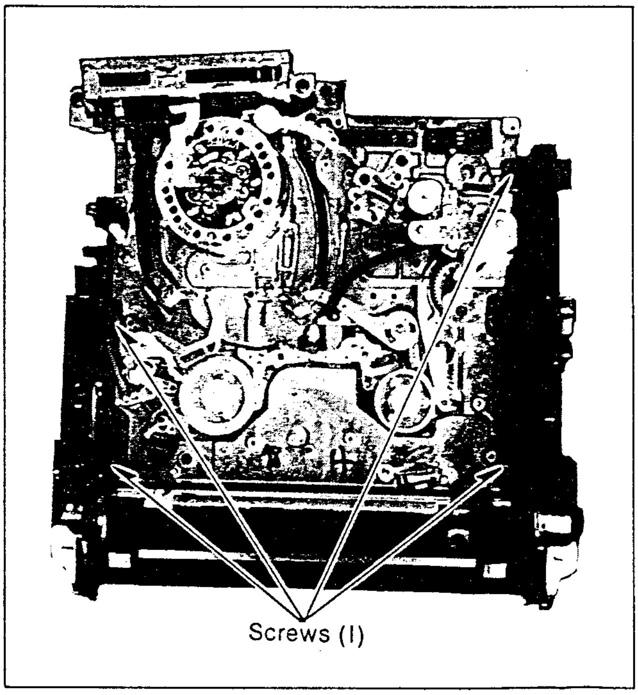


Fig. A16

2-4-17. REMOVAL OF THE PINCH ARM UNIT

1) Unlock the locking tab on the OPENER PIECE and remove it from the shaft.
2) Remove the PINCH ARM UNIT from the shaft.

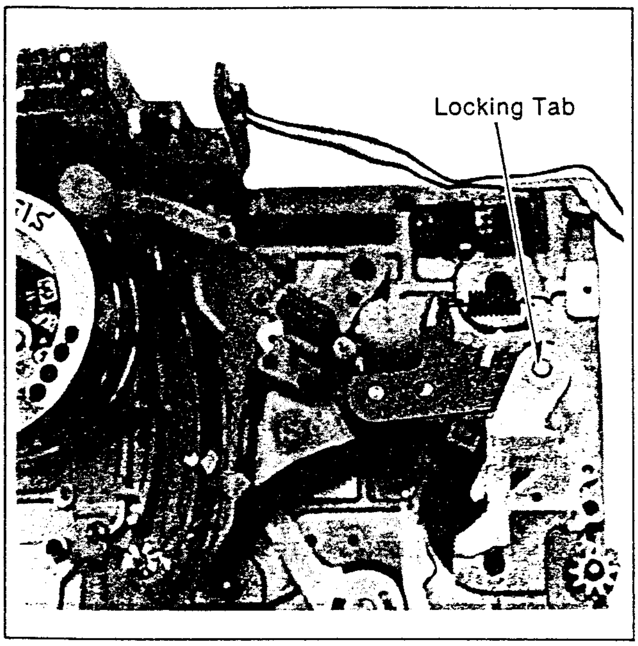

Locking Tab

Fig. A17

2-4-18. REMOVAL OF THE PINCH CAM GEAR AND P5 ARM UNIT

1) Unlock the locking tab of the P5 STOPPER and remove the P5 STOPPER.
2) Remove the screw(J) and the cut washer.
3) Remove the P5 STOPPER BASE.
4) Remove the PINCH CAM GEAR and P5 ARM UNIT.

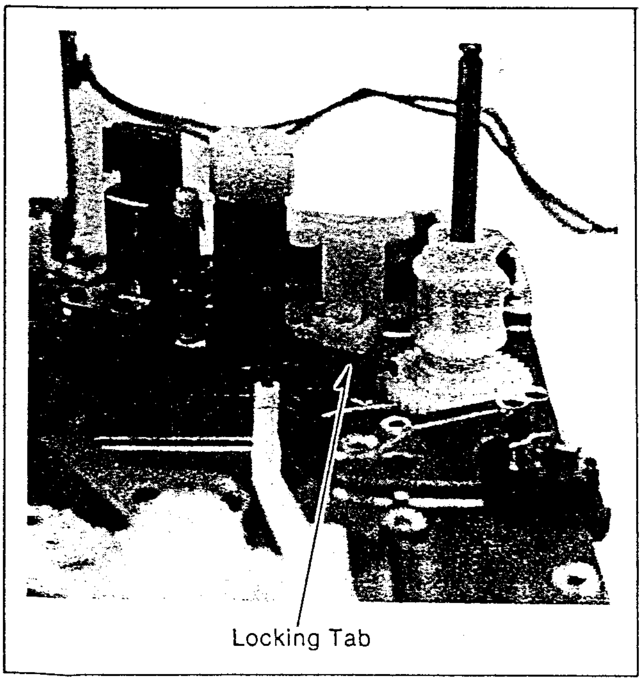

Locking Tab

Fig. A18

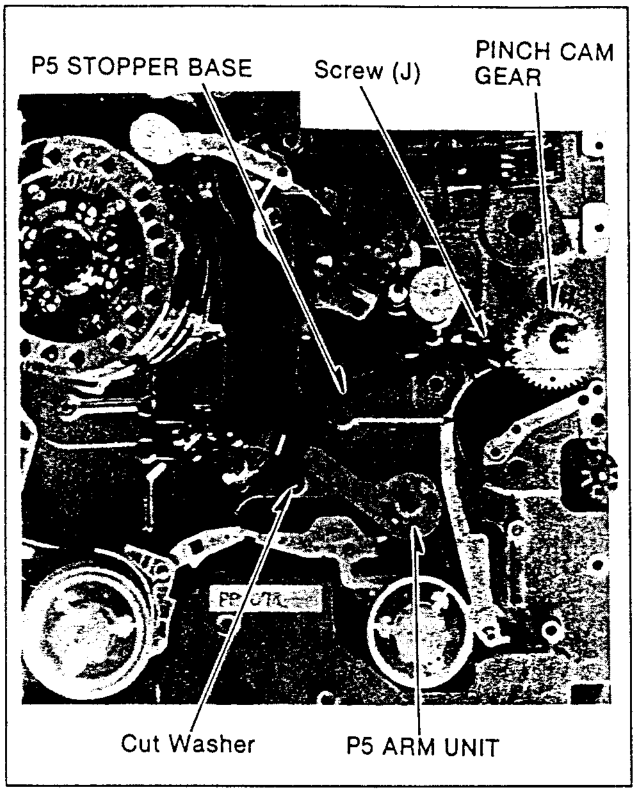

P5 STOPPER BASE
Screw (J)
PINCH CAM GEAR
Cut Washer
P5 ARM UNIT

Fig. A19

2-4-19. REMOVAL OF THE TAKE-UP TENSION REGULATOR ARM UNIT

1) Disconnect the spring from the bottom of the chassis.
2) Unlock the locking tab and lift the TAKE-UP TENSION REGULATOR ARM UNIT off the shaft.

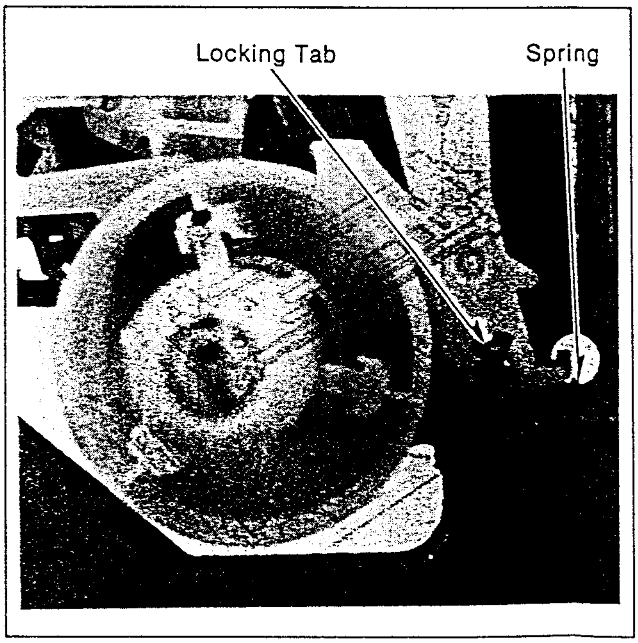

Locking Tab
Spring

Fig. A20

2-4-20. REMOVAL OF THE CARRIAGE CONNECTION GEAR

1) Remove the cut washer.
2) Lift the CARRIAGE CONNECTION GEAR off the shaft.

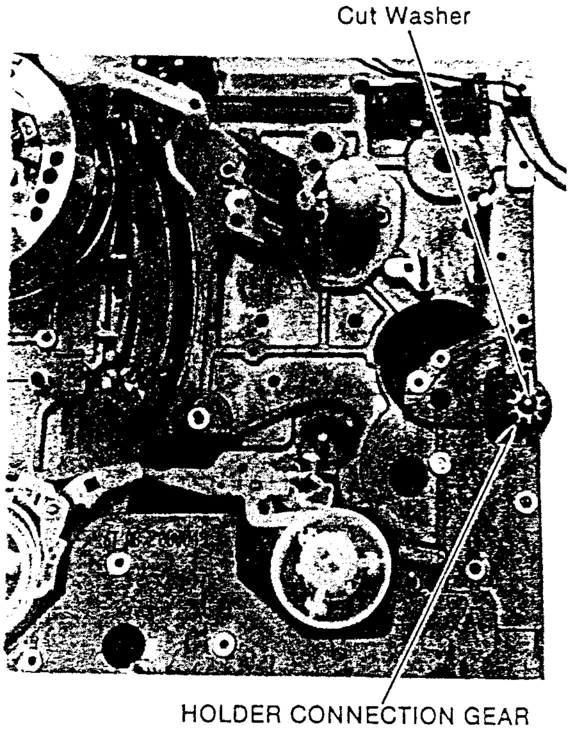

Cut Washer
HOLDER CONNECTION GEAR

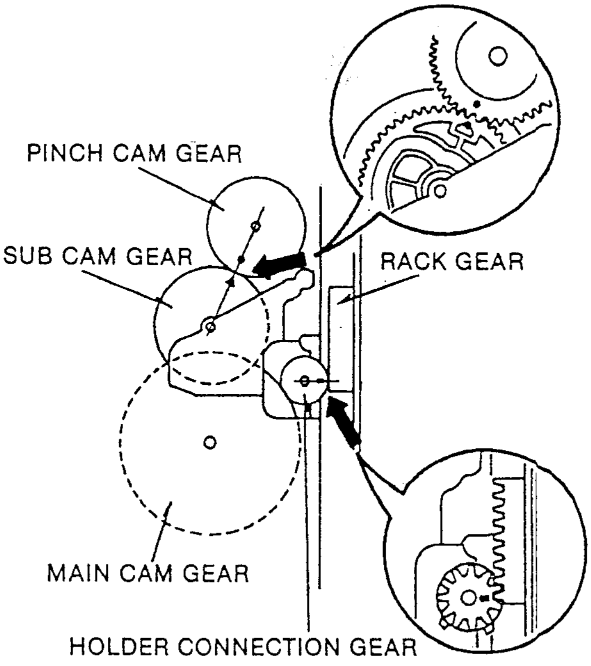
Fig. A21

2-5. ASSEMBLY PROCEDURES OF MECHANISM

2-5-1. VIEW OF PHASE ALIGNMENT

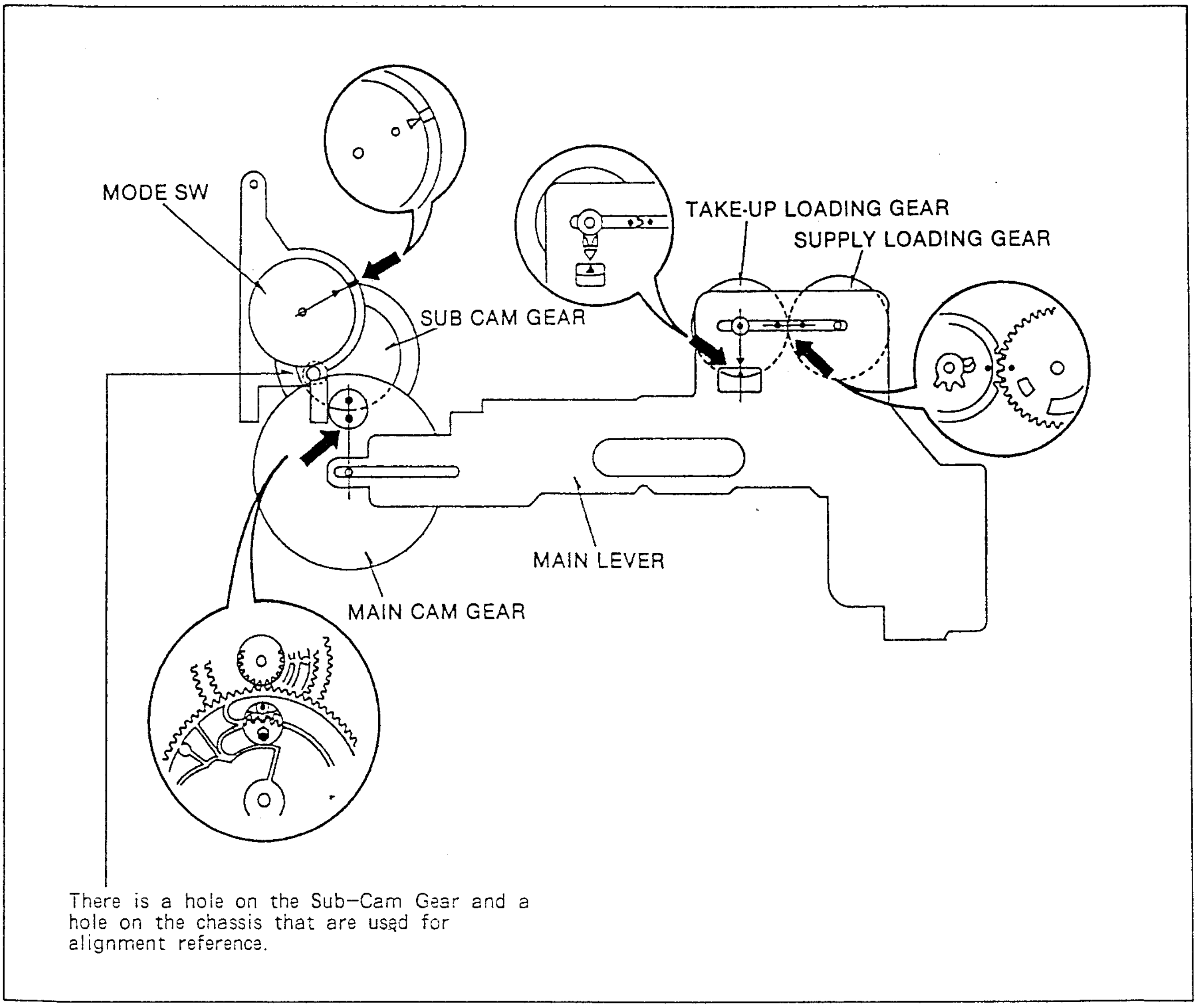
The gear phase alignment is perform in the cassette down position and is crucial for the K Mechanism to operate correctly.

1) Top View of Gear Phase Alignment Marks.
   There are alignment marks on the Pinch Cam Gear and Sub Cam Gear. There is one alignment mark on the carriage connection gear.


PINCH CAM GEAR
SUB CAM GEAR
RACK GEAR
MAIN CAM GEAR
HOLDER CONNECTION GEAR

Top View of Gear Phase Alignment

2) Bottom View of Gear Phase Alignment Marks. There are alignment marks on Take-up Loading Gear and Supply Loading Gear. There is an additional mark on the Take-up Loading Gear that aligns with the mark on the main lever. There are alignment marks on the Main Cam Gear and the Sub Cam Gear. The mode switch gear mark aligns with a notch in the mode switch frame.


MODE SW
TAKE-UP LOADING GEAR
SUPPLY LOADING GEAR
SUB CAM GEAR
MAIN LEVER
MAIN CAM GEAR

There is a hole on the Sub-Cam Gear and a hole on the chassis that are used for alignment reference.

Bottom View of Gear Phase Alignment

2–5–2. ASSEMBLY OF THE CARRIAGE CONNECTION GEAR

1) Install the CARRIAGE CONNECTION GEAR as shown in Fig.A21.
2) Install the cut washer.

2–5–3. ASSEMBLY OF THE TAKE–UP TENSION REGULATOR ARM UNIT, P5 ARM UNIT PINCH CAM GEAR, P5 STOPPER BASE, P5 STOPPER, PINCH CAM UNIT AND OPENER PIECE

1) Install the TAKE–UP TENSION REGULATOR ARM UNIT.
2) Hook the spring to hole on the chassis.
3) Install the P5 ARM UNIT and PINCH CAM GEAR.
4) Install the P5 STOPPER BASE with cut washer and screw(J).
5) Install the P5 STOPPER, PINCH ARM UNIT and OPENER PIECE.

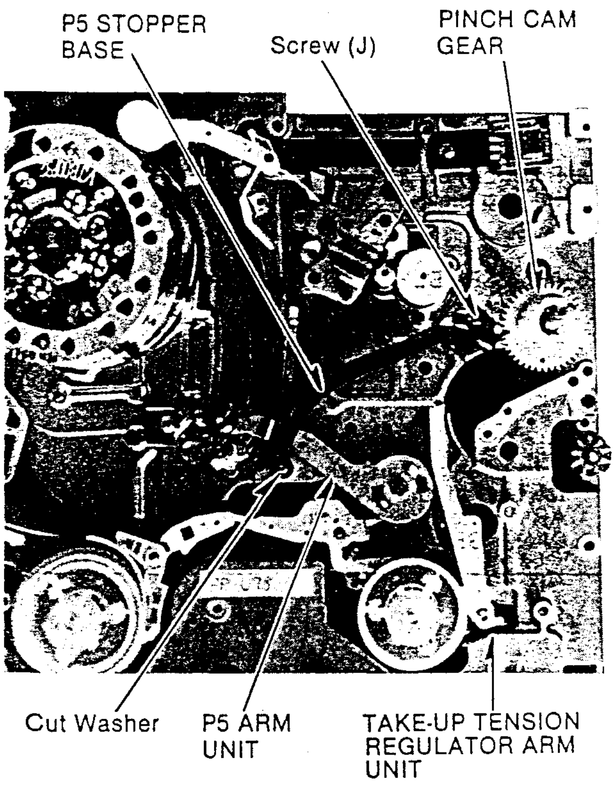

P5 STOPPER BASE
Screw (J)
PINCH CAM GEAR
Cut Washer
P5 ARM UNIT
TAKE-UP TENSION REGULATOR ARM UNIT

Fig. K1

2–5–4. ASSEMBLY OF THE IDLER ARM UNIT, TAKE–UP AND SUPPLY REEL GEARS, IDLER REGULATOR LEVER, CONNECTION LEVER UNIT AND CENTRE CLUTCH

1) Install the IDLER UNIT, TAKE–UP and SUPPLY REEL GEARs, IDLER REGULATOR LEVER and CONNECTION LEVER UNIT.
2) Install the CENTRE CLUTCH with cut washer.

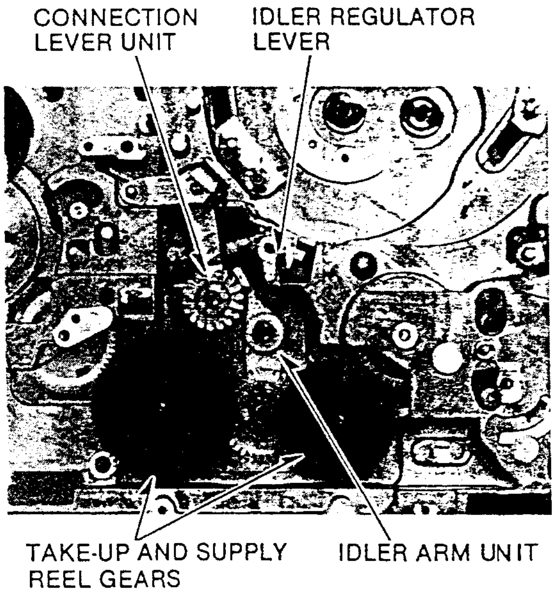

CONNECTION LEVER UNIT
IDLER REGULATOR LEVER
TAKE-UP AND SUPPLY REEL GEARS
IDLER ARM UNIT

Fig. K2

2–5–5. ASSEMBLY OF THE SUB CAM GEAR

The SUB CAM GEAR is used for the reference of the phase.

1) Install the SUB CAM GEAR so that the chassis hole aligns with hole in the SUB CAM GEAR. Also, the hole in the outer gear of the SUB CAM GEAR must align with the hole in the PINCH CAM GEAR. The boss on the PINCH ARM must be installed in the cam groove of the SUB–CAM GEAR. This is used for the reference of the phase. To aid installation of the SUB–CAM GEAR insert a fixing pin into the holes of the SUB–CAM GEAR and the chassis.

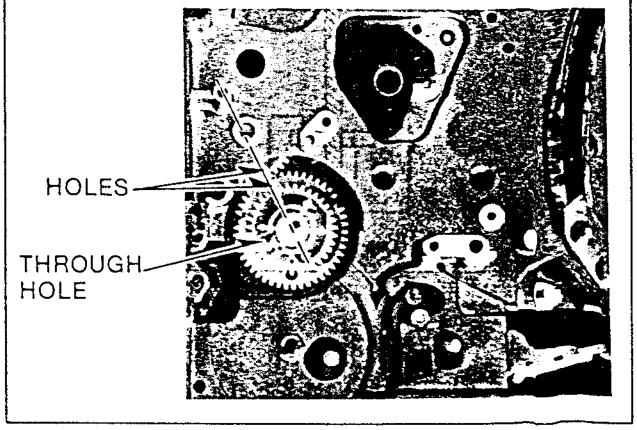

HOLES
THROUGH HOLE

Fig. K3

2-5-6. ASSEMBLY OF THE STATOR UNIT

1) Place the STATOR UNIT into position. Loosely reinstall the 3 screws that secure the STATOR and HOUSING UNIT. Next insert the CENTERING PIN then tighten the 3 screws as shown in Fig.K4.

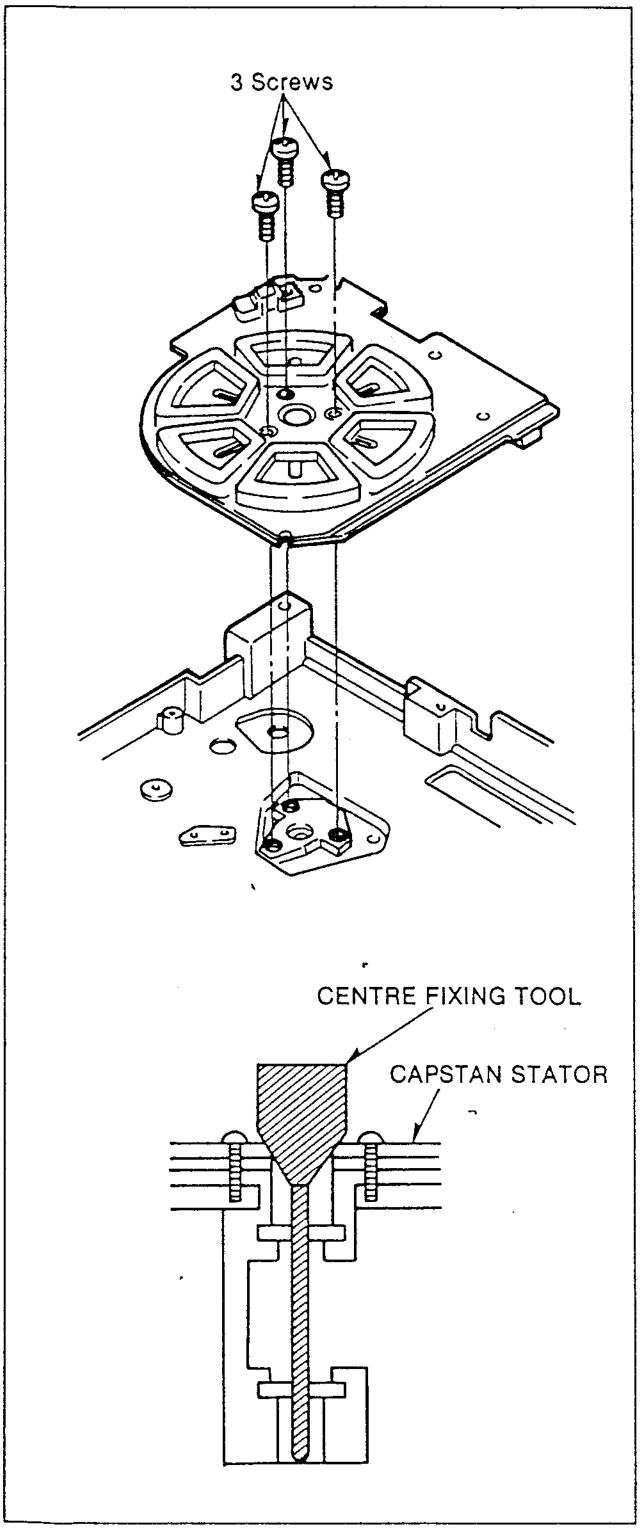


Fig. K4

2) Remove the oil seal from the ROTOR SHAFT. Partially install the ROTOR SHAFT into the lower position and install the oil seal. Insert the ROTOR SHAFT farther into the housing and install the second OIL SEAL in the upper position. Push the lower OIL SEAL down the ROTOR SHAFT into the housing.

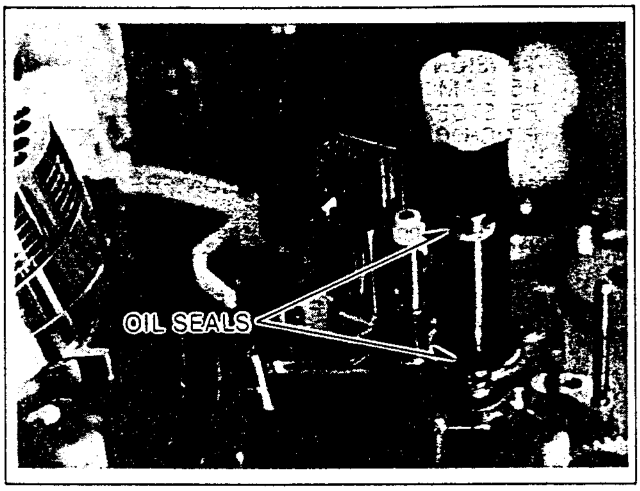


Fig. K5

3) Clean the ROTOR SHAFT after replacement. Reinstall the ROTOR STOPPER and the screw on the top side.

2-5-7. ASSEMBLY OF THE MAIN CAM GEAR

NOTE:
Before installing the MAIN CAM GEAR, set the CONNECTION GEAR so that the side of the gear with no teeth is towards the MAIN CAM GEAR.

1) Install the MAIN CAM GEAR so that the hole marker aligns with the SUB-CAM GEAR and insert the boss of the TAKE-UP TENSION REGULATOR ARM into the slot on the bottom of the MAIN CAM GEAR.

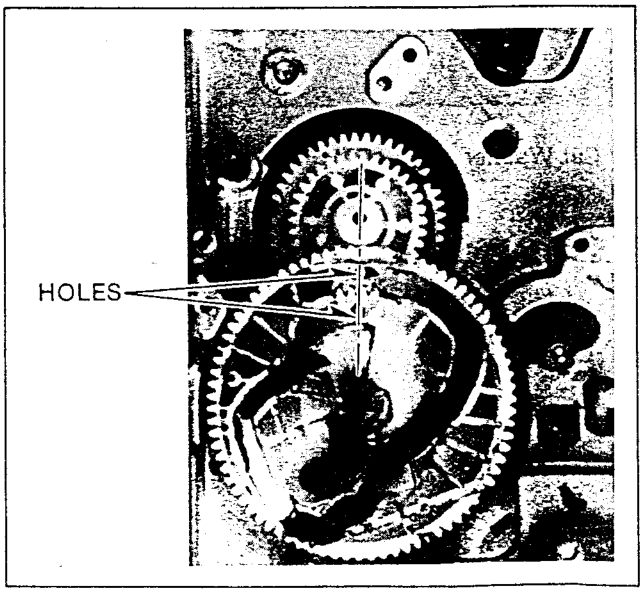


Fig. K6

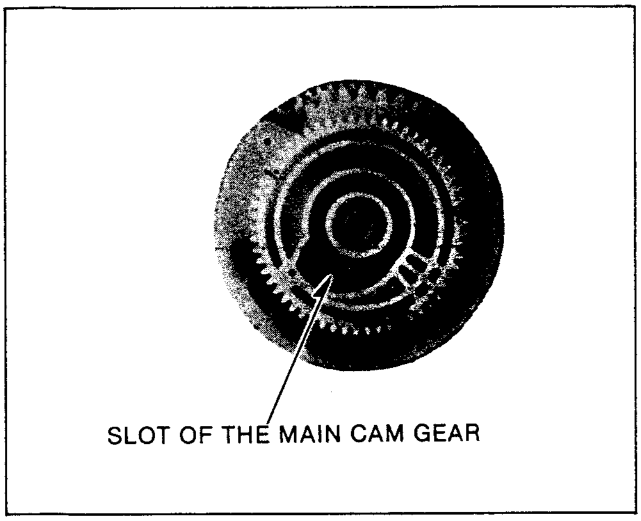


Fig. K7

2–5–8. ASSEMBLY OF THE MODE SW

1) Align the mark on the MODE SWITCH GEAR with the notch on the MODE SWITCH FRAME.
2) Install the MODE SWITCH taking care that all the phase alignments are correct. Check the CAM GEAR timing by rotating the MAIN CAM GEAR.
3) Install the screw(K) the retains the MODE SWITCH and ROTOR STOPPER.

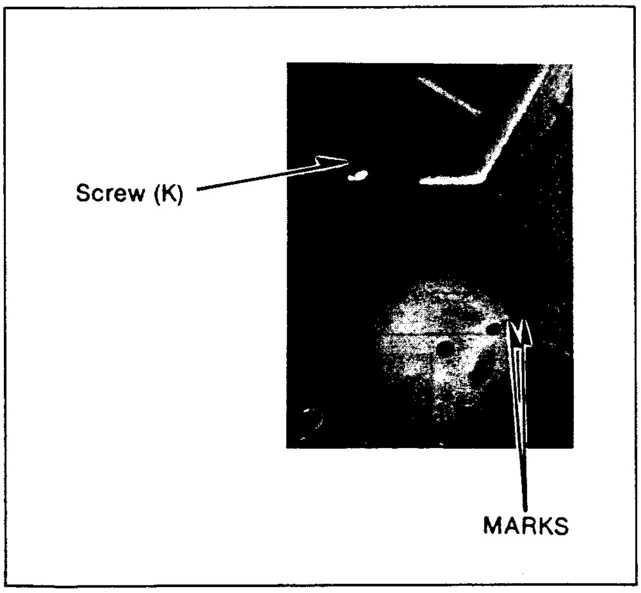


Fig. K8

2–5–9. ASSEMBLY OF THE T & S LOADING ARMS

1) Set the shaft holders to the unloaded position. Take care that the P5 POST does not interfere with the P3 Post or prevent it from going to the unloaded position. The TENSION ARM must be set to the position that will allow the P2 POST to move back to the unloaded position.

2) Install the TAKE–UP LOADING ARM and SUPPLY LOADING ARM, aligning the marks on the both GEARS.

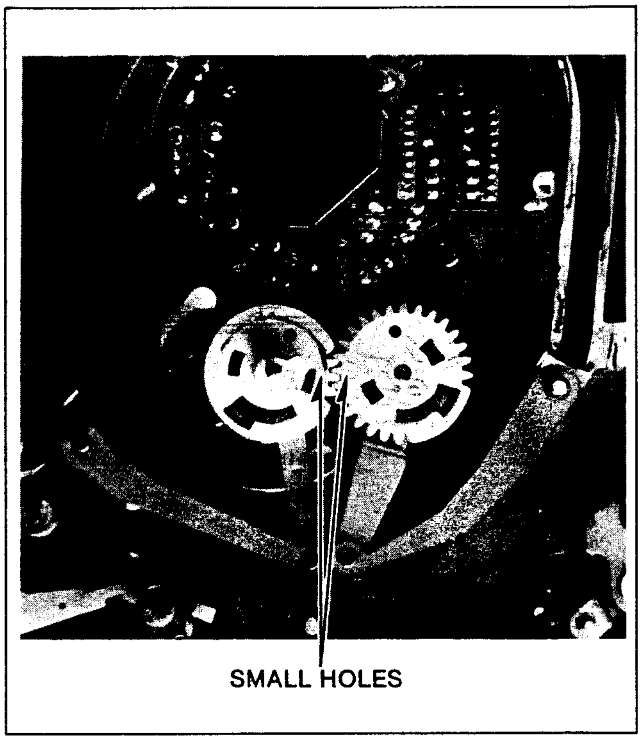


Fig. K9

2-5-10. ASSEMBLY OF THE MAIN LEVER

1) Install the MAIN LEVER ARM checking that the boss arms and shafts are in the correct position and the mark on the MAIN LEVER ARM is aligned with mark on the TAKE-UP LOADING GEAR.

2) Install the 2 cut washers.

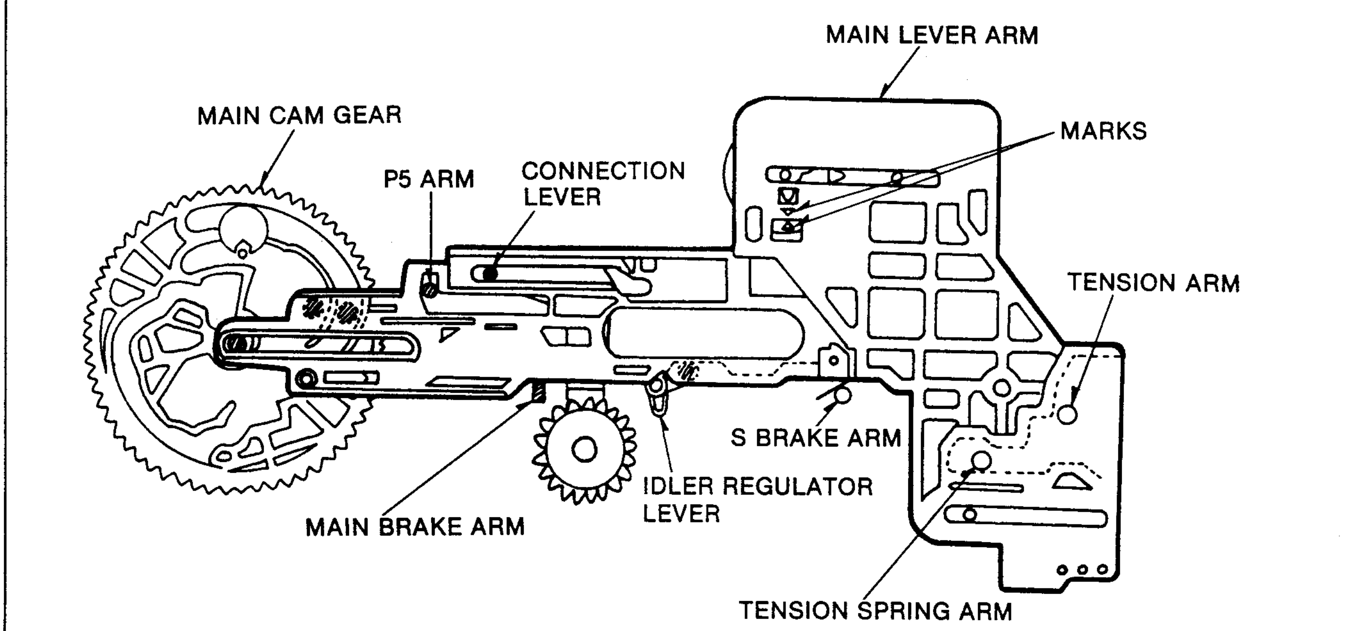

MAIN LEVER ARM
MAIN CAM GEAR
MARKS
P5 ARM
CONNECTION LEVER
TENSION ARM
S BRAKE ARM
IDLER REGULATOR LEVER
MAIN BRAKE ARM
TENSION SPRING ARM

Fig. K10

2-5-11. ASSEMBLY OF THE WORM WHEEL GEAR & LOADING MOTOR BRACKET

1) Reinstall the WORM WHEEL GEAR.

2) Install the LOADING MOTOR BRACKET. First set the BRACKET over the MAIN CAM GEAR shaft and slide until it locks. Then push down on the BRACKET until the locking tab is connected to the chassis. Reinstall the screw(L).

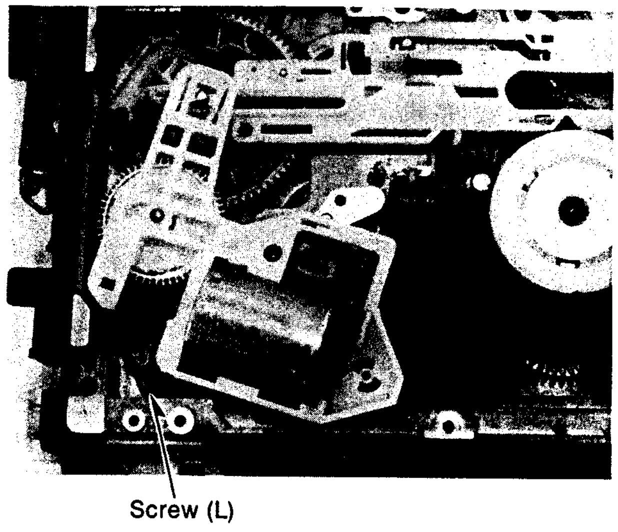


Fig. K11

2-5-12. ASSEMBLY OF THE TIMING BELT & SS BRAKE BASE

1) Install the TIMING BELT.

2) Put the TIMING BELT onto the TENSION ROLLER, slide the SS BRAKE BASE into position and install 2 screws(M).

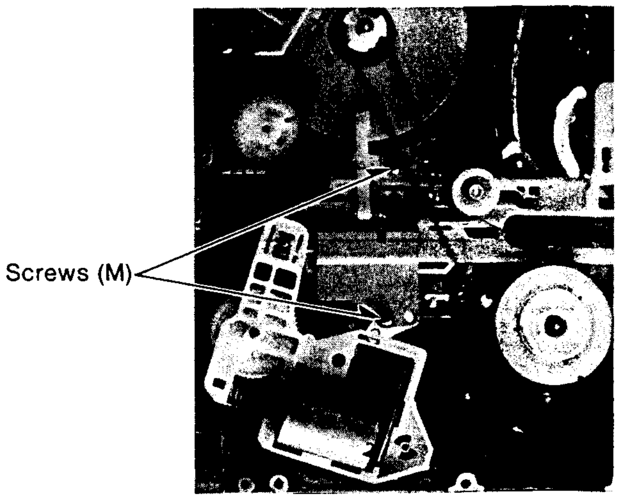


Fig. K12

2-5-13. ASSEMBLY OF THE PINCH ARM UNIT

1) Install the OPENER PIECE by inserting the boss into the PINCH ARM UNIT. Push down until the lock engages the shaft.

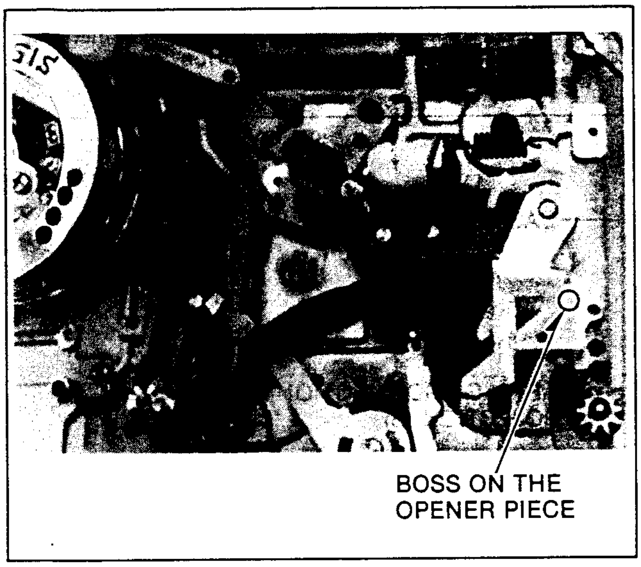


Fig. K13

2-5-14. CHECKING THE MECHANISM MOVEMENT

1) Check by moving the mechanism by hand then re-check using a battery to power the motor.

2) Rotate the LOADING MOTOR by hand in the loading direction while checking the movement of each gear. If the mechanism operates correctly when moved by hand, connect a battery to the LOADING MOTOR and re-check the movement of each gear as shown in Fig.S1/S2/S3.

3) Connect the battery to check the loading operation and then reverse the battery connection to check the unloading operation.

4) Reverse the battery to move the mechanism to the cassette down position.

2-5-15. ASSEMBLY OF THE CASSETTE HOLDER

1. ASSEMBLE A CASSETTE HOLDER AS AN UNIT

1) Put the CASSETTE HOLDER into the cassette up condition by moving the WIPER ARM.
2) Turn the LOADING MOTOR by hand in the unloading direction until the CARRIAGE CONNECTION GEAR and the MODE SW is eject position as shown in Fig.K14/K15

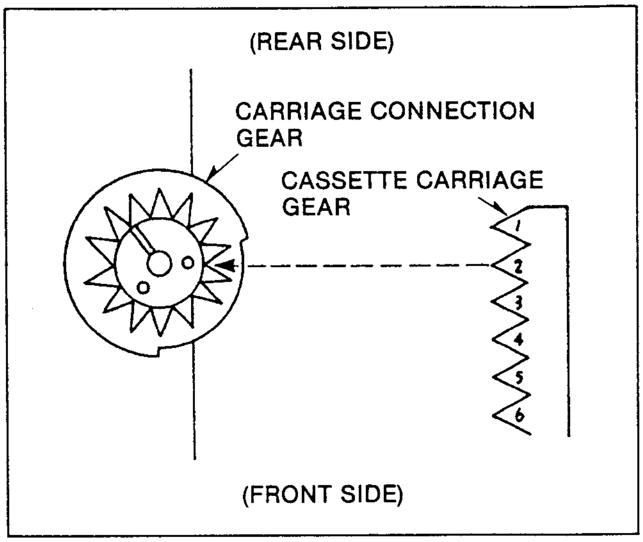


Fig. K14

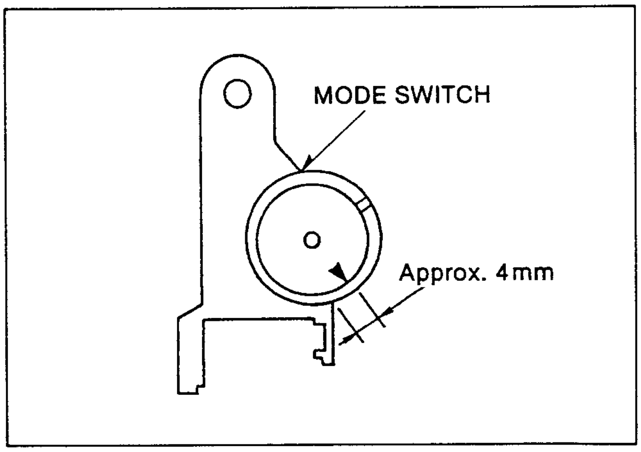


Fig. K15

3) Install the CASSETTE HOLDER UNIT as shown in Fig.K14.
4) Install 4 screws to attach the CASSETTE HOLDER UNIT.

<Eject Operation>

The main cam gear rotates in the direction of the arrow. The projection (B) of the carriage connection gear engages with the recession (A) of the main cam gear. The carriage connection gear rotates in the direction of the arrow to perform the Eject operation.

<NOTE>
If the Eject operation is performed without the cassette carriage installed while repairing or making the mechanical phase alignment, the main cam gear will not engage with the carriage connection gear will not rotate.
For performing the Eject operation with the cassette carriage not installed, it is necessary to rotate to the carriage connection gear by hand in the direction of the arrow.

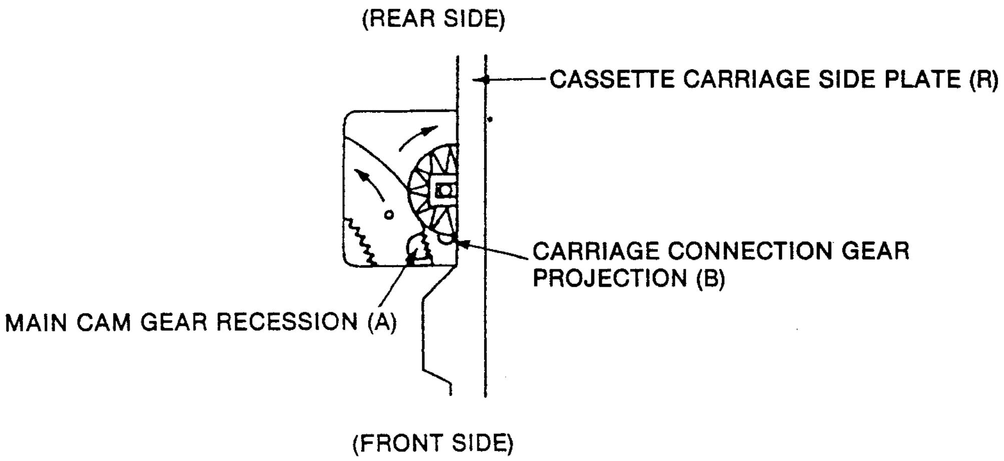

(REAR SIDE)
CASSETTE CARRIAGE SIDE PLATE (R)
CARRIAGE CONNECTION GEAR PROJECTION (B)
MAIN CAM GEAR RECESSION (A)
(FRONT SIDE)

Fig. K16 Top View of Eject Operation

2. ASSEMBLE A CASSETTE HOLDER SEPARATELY

1) Put the CASSETTE HOLDER into the cassette down position by moving the WIPER ARM. Check the position of the WIPER ARM and RACK A. The mark of RACK A aligns with the mark on the WIPER ARM.

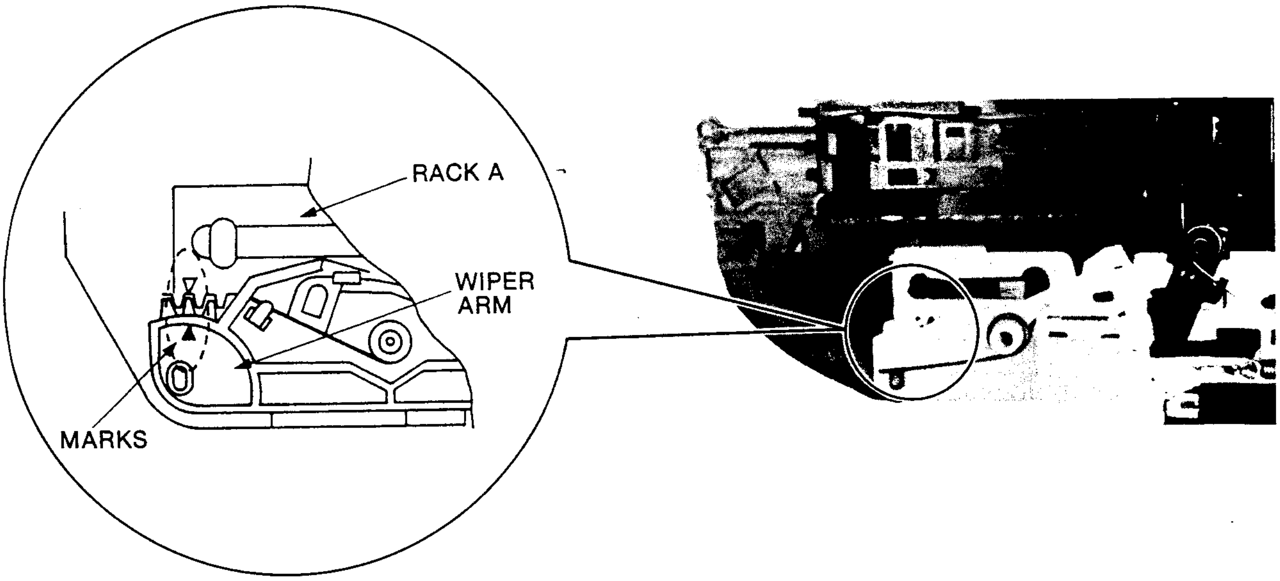

RACK A
WIPER ARM
MARKS

Fig. K17

2) Install the SIDE PLATE ASSEMBLY so that the first gear of RACK B aligns with the mark on the CARRIAGE CONNECTION GEAR.

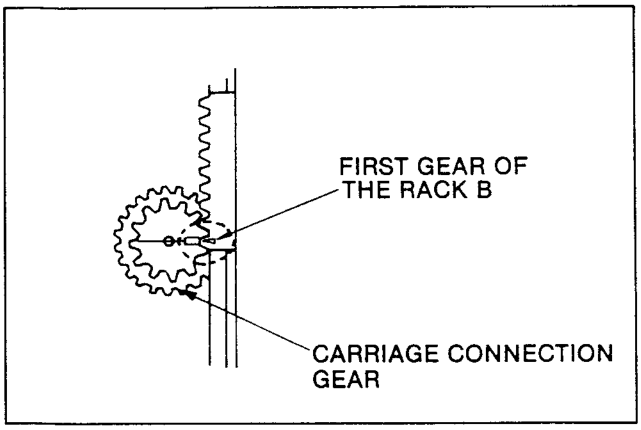


Fig. K18

3) Install 4 screws to attach the SIDE PLATE ASSEMBLY.

4) Turn the LOADING MOTOR by hand to the cassette up position while pushing the WIPER ARM to the cassette up position.

5) Insert the 5 posts on the CASSETTE HOLDER into the Side Plate.

6) Set the TOP PLATE on the Side Plate then push it down until it locks.

2-5-16. ASSEMBLY OF THE MECHANISM CHASSIS

1) Install the MECHANISM CONNECTION C.B.A. onto the chassis. Then install the chassis into the frame and connect all the cables and connectors.

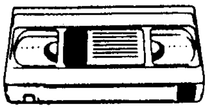
2) Clean the DD CYLINDER after reinstallation.

3) Insert a cassette and adjust the tape travel and check all the operation modes.

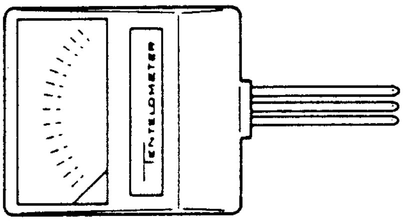
Servicing Fixtures & Tools

VFJ8125H3F
PAL VHS Alignment Tape

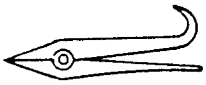
VFM8080HQFP
NTSC VHS Alignment Tape



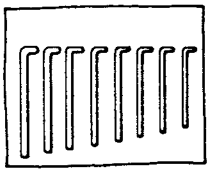
VFK0132
Back Tension Meter
(Tentelometer, Made in U.S.A.)



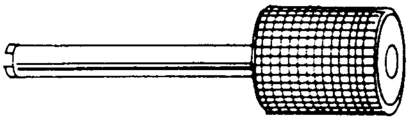
VFK0335
Retaining Ring Remover
(3mm/4mm)



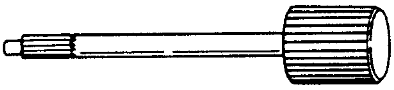
VFK0326
Hex. Wrench Set
(0.7, 0.9, 1.2, 1.5, 1.6, 2.0, 2.4, 3.0mm)



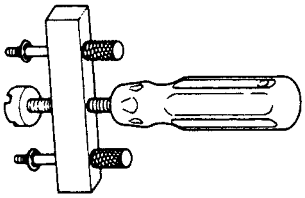
VFK0329
Post Adjustment Screw Driver



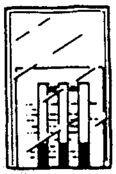
VFK0330
Fine Adjustment Gear Driver



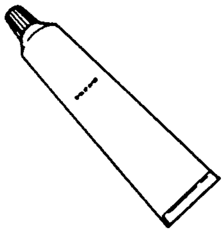
VFK0341
Upper Cylinder Remover Jog



VFK27
Hand Cleaning Stick

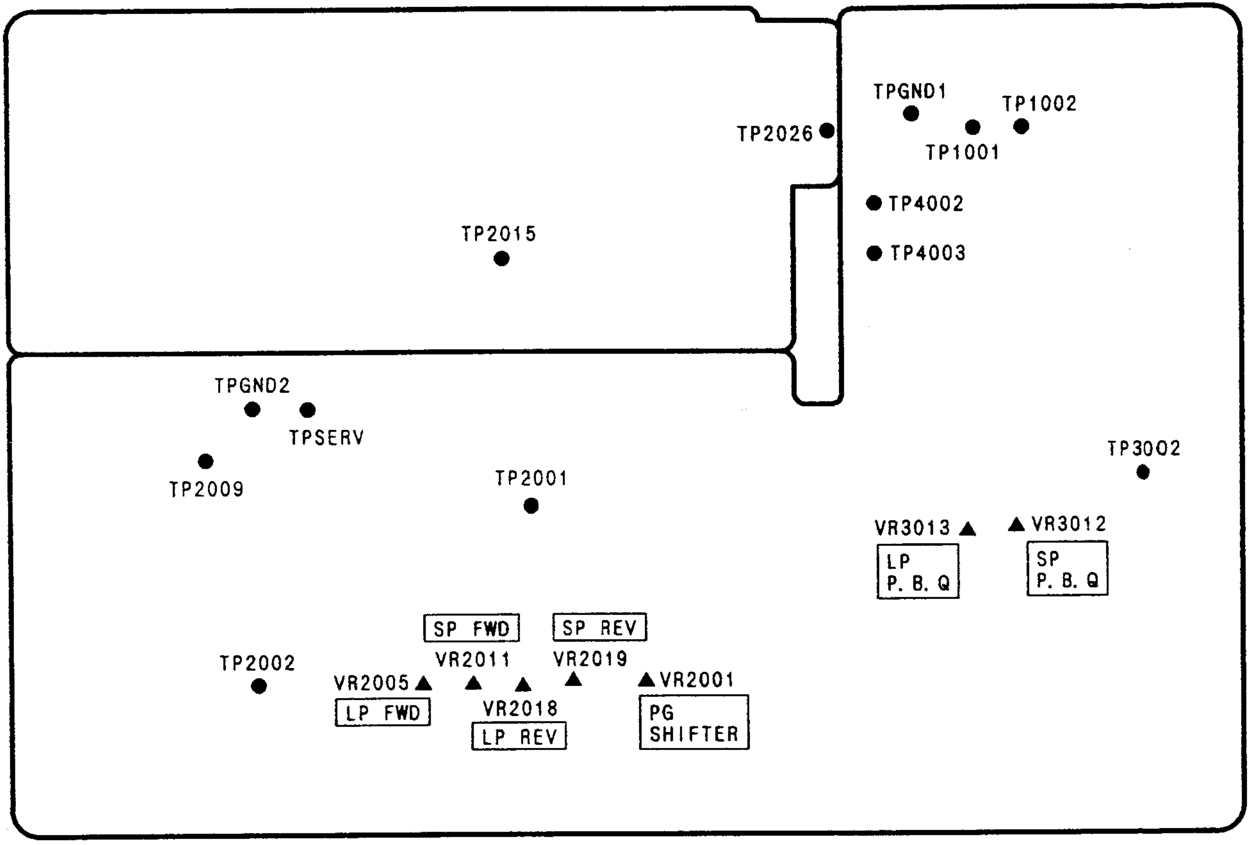


MOR265
Morlytone Grease

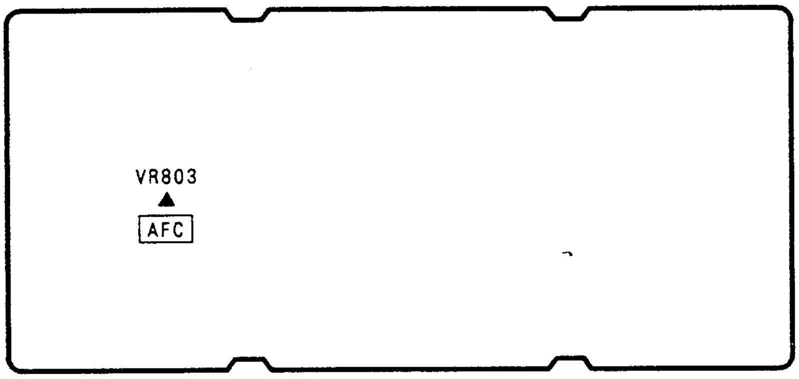


LOCATION OF TEST POINTS & CONTROLS

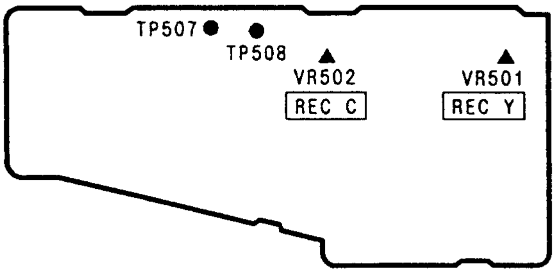
MAIN C.B.A.


TPGND1
TP1002
TP2026
TP1001
TP4002
TP4003
TP2015
TPGND2
TPSERV
TP2009
TP2001
TP3002
VR3013
VR3012
LP
P. B. Q
SP
P. B. Q
SP FWD
SP REV
TP2002
VR2011
VR2019
VR2005
VR2001
LP FWD
VR2018
LP REV
PG
SHIFTER

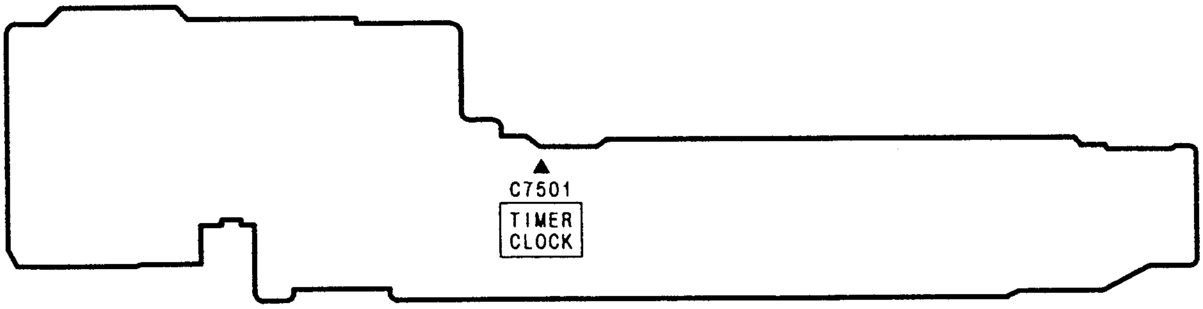
LUMINANCE & CHROMINANCE PACK C.B.A.



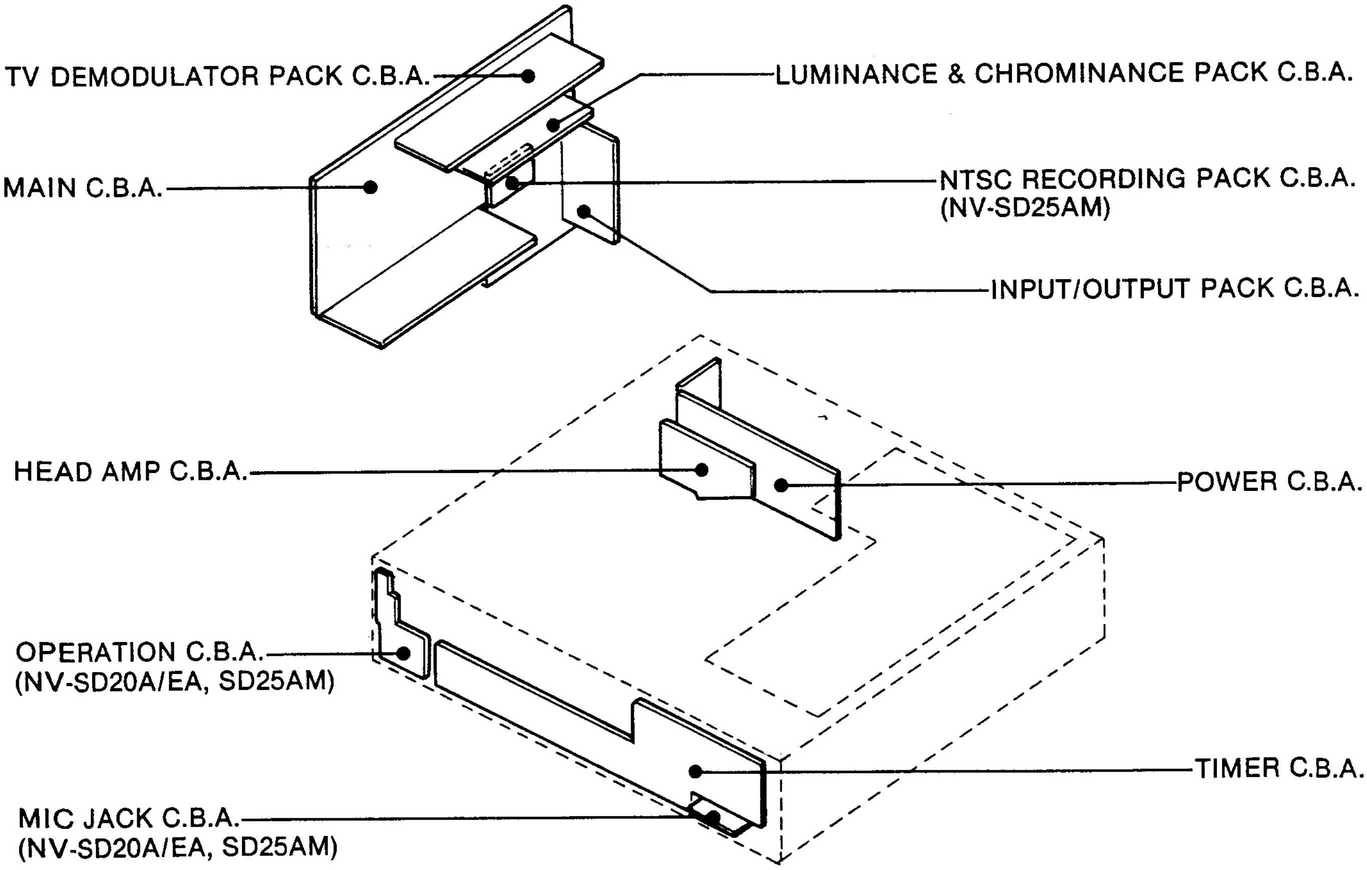
HEAD AMP C.B.A.


TP507
TP508
VR502
REC C
VR501
REC Y

TIMER C.B.A.


C7501
TIMER
CLOCK

CIRCUIT BOARD LAYOUT

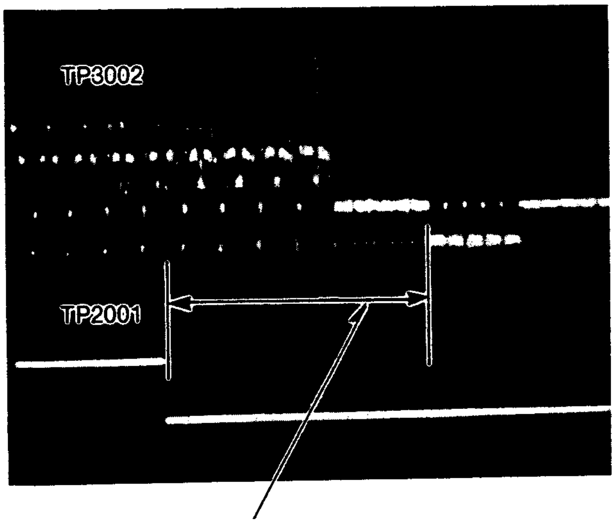

TV DEMODULATOR PACK C.B.A.
LUMINANCE & CHROMINANCE PACK C.B.A.
MAIN C.B.A.
NTSC RECORDING PACK C.B.A.
(NV-SD25AM)
INPUT/OUTPUT PACK C.B.A.
HEAD AMP C.B.A.
POWER C.B.A.
OPERATION C.B.A.
(NV-SD20A/EA, SD25AM)
TIMER C.B.A.
MIC JACK C.B.A.
(NV-SD20A/EA, SD25AM)

SERVO SECTION

2-6-4. PG SHIFTER ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP2001 TP3002	VR2001	PLAYBACK	
TAPE	**M. EQ.**	**SPEC.**	
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	6.5+-0.5(H) [NV-SD10A/EA/AM] 7.0+-0.5(H) [NV-SD20A/EA, NV-SD25AM]	

1. Connect the oscilloscope to TP2001(H.SW) and TP3002(V.OUT)
2. Playback the alignment tape.
3. Adjust VR2001 so that phase difference between falling edge of Head SW pulse and V-Sync is 6.5+-0.5(H) [NV-SD10A/EA/AM] / 7.0+-0.5(H) [NV-SD20A/EA,NV-SD25AM]



6.5+ −0.5 (H)
[NV-SD10A/EA/AM]

7.5+ −0.5 (H)
[NV-SD20A/EA, NV-SD25AM]

TP3002 VIDEO
TP2001 H. SW (TRIGGER)

Fig. E3

2-6-5. SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2011(SP) VR2006(LP)	SP (SELF RECORDED) STILL	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	A=B (A+B)/V<1/6	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2011(SP)(VR2006(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect a jumper wire.

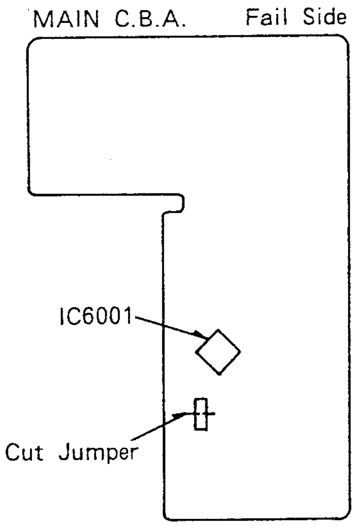


Fig. E4

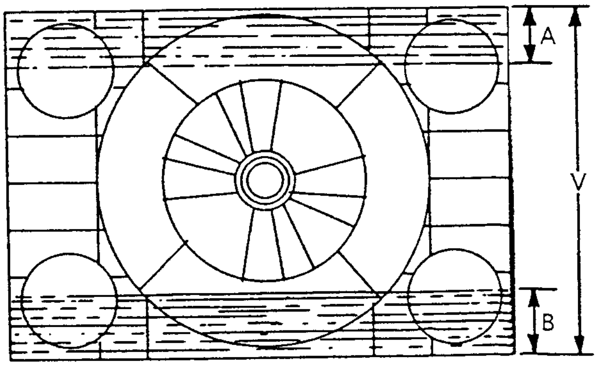


Fig. E5

2-6. ELECTRICAL ADJUSTMENT PROCEDURES

This section provides complete adjustment procedures required for electric circuits of VHS Video Cassette Recorders.

2-6-1. TEST EQUIPMENT

To perform electrical adjustments following equipment is required.

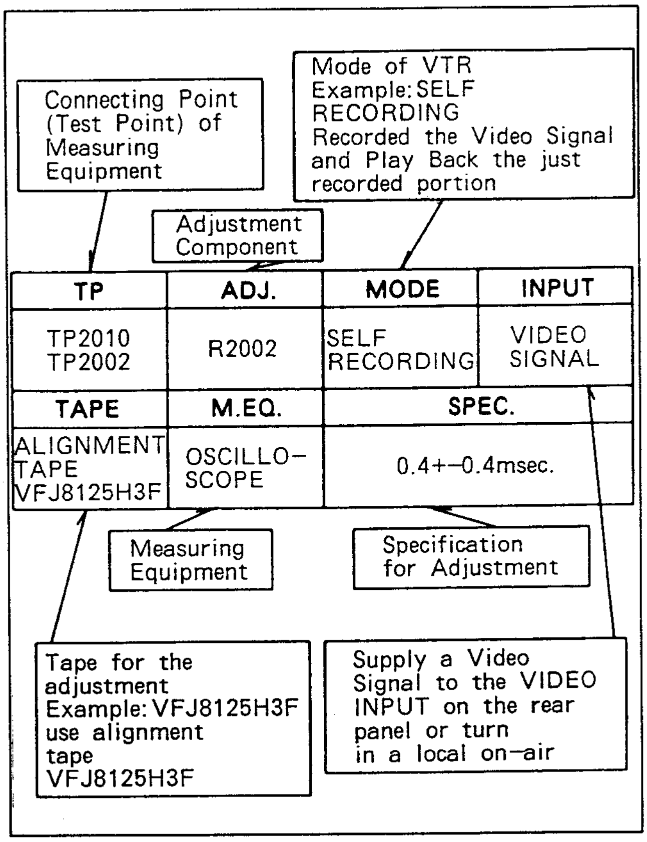
1. Dual-Trace Oscilloscope. (More than 35 MHz)
    Voltage Range: 0.005-5V/div
    Frequency Range: DC-35MHz
    Probes: 10:1
2. Frequency Counter.
    Frequency Range: 0-10MHz
    Probes: 1:1
3. Universal Counter.
4. Vacuum Tube Volt Meter. (V.T.V.M.)
5. Video Sweep Generator.
6. Sine Wave Generator.
7. Video Pattern Generator.
8. VHS Alignment Tape. (VFJ8125H3F)
9. VHS Blank Tape.
10. Monitor.
11. Plastic Tip Driver.

2-6-2. PREPARATION

During adjustment, set each selector as follows: when no indication in the procedure.

NOISE FILTER/EDIT SW.....OFF
TEST SIGNAL SW (REAR).....OFF
SYSTEM SW(NV-SD25AM).....PAL
TAPE SPEED.....SP

2-6-3. HOW TO READ ADJUSTMENT PROCEDURES


Connecting Point (Test Point) of Measuring Equipment
Mode of VTR Example: SELF RECORDING Recorded the Video Signal and Play Back the just recorded portion
Adjustment Component
Measuring Equipment
Specification for Adjustment
Tape for the adjustment Example: VFJ8125H3F use alignment tape VFJ8125H3F
Supply a Video Signal to the VIDEO INPUT on the rear panel or turn in a local on-air

TP	ADJ.	MODE	INPUT
TP2010 TP2002	R2002	SELF RECORDING	VIDEO SIGNAL

TAPE	M.EQ.	SPEC.
ALIGNMENT TAPE VFJ8125H3F	OSCILLO-SCOPE	0.4+−0.4msec.

Fig. E1

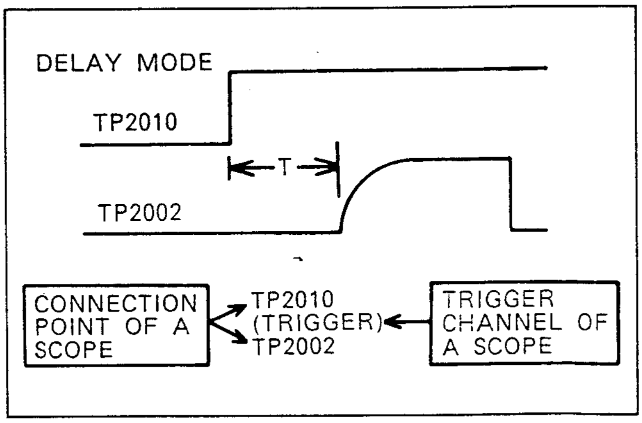

DELAY MODE
TP2010
T
TP2002
CONNECTION POINT OF A SCOPE
TP2010
(TRIGGER)
TP2002
TRIGGER CHANNEL OF A SCOPE

Fig. E2

2–6–6. REVERSE SLOW TRACKING ADJUSTMENT

TP	ADJ.	MODE	INPUT
MONITOR SCREEN	VR2019(SP) VR2018(LP)	REVERSE SLOW	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	MONITOR TV	SP:A=B (A+B)/V=<1/6 LP:A=0 B/V=<1/3	

1. Connect a cut jumper wire as shown in Fig.E4.
2. Record the colour bar in SP(LP) mode for a few minutes and playback the just recorded portion.
3. Place the unit in SLOW mode by pressing search button on Remote Controller Unit.
4. Adjust VR2019(SP)(VR2018(LP)) until noise bar on the monitor screen is minimized. (Detail specifications are shown in Fig.E5)
5. Disconnect a jumper wire.

LUMINANCE & CHROMINANCE SECTION

2–6–7. ARTIFICIAL NTSC AFC FREE RUN ADJUSTMENT (EXCEPT NV–SD10A/EA)

TP	ADJ.	MODE	INPUT
PIN (9) of IC802	VR803	STOP	SINEWAVE 8KHz –10dB (316mV)
TAPE	**M. EQ.**	**SPEC.**	
	FREQUENCY COUNTER SINEWAVE GENERATOR	15735+–100(Hz)	

Note:
Supply +5V DC to Pin 27 of IC802.

1. Supply a sinewave (8KHz/–10dB) to Line In. (Video In)
2. Connect the frequency counter to Pin 9 of IC802.
3. Turn VR803 to maximum frequency.
4. Adjust VR803 so the frequency is 15735+–100(Hz).

2–6–8. RECORDING CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP507(HOT) TP508(GND)	VR501(Y) VR502(C)	RECORDING	COLOUR BAR
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO–SCOPE	Y:150+–5(mVp–p) C:37+–2(mVp–p) [NV–SD10A/EA/AM] Y:130+–5(mVp–p) C:32+–2(mVp–p) [NV–SD20A/EA, NV–SD25AM]	

1. Record the colour bar.
2. Connect the oscilloscope to TP507(HOT) and TP508(GND).
3. Adjust VR501 so the amplitude of sync tip portion is 150 +– 5mVp–p [NV–SD10A/EA/AM]/ 130+–5mVp–p[NV–SD20A/EA,NV–SD25AM].
4. Supply +5V DC to PP3001–6 to reduce luminance component.
5. Adjust VR502 until the amplitude of Cyan is 2mVp–p [NV–SD10/A/EA/AM] / 32+–2mVp–p [NV–SD20A/EA,NV–SD25AM].

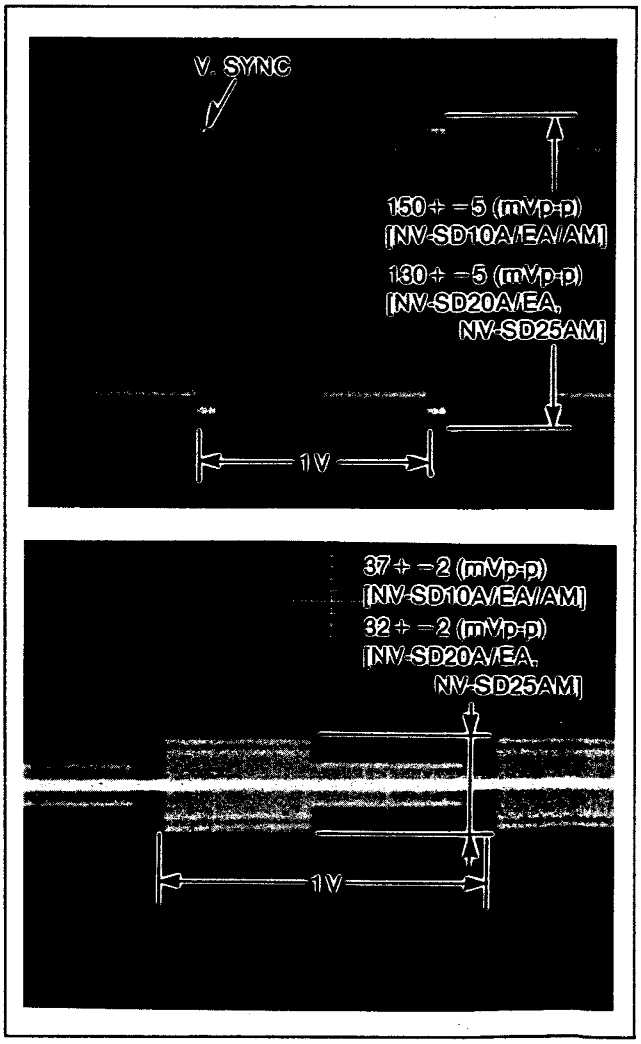


Fig. E6

2-6-9. VIDEO FREQUENCY RESPONSE ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP3002	VR3012(SP) VR3013(LP)	(SELF RECORDED) PLAYBACK (SP/LP)	VIDEO SWEEP SIGNAL
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	OSCILLO-SCOPE VIDEO SWEEP GENERATOR	SP:0+-1(dB) (90 - 110%) LP:0+-1(dB) (90 - 110%)	

Note:

(1) Set the Video Sweep Signal as shown in Fig.E7.

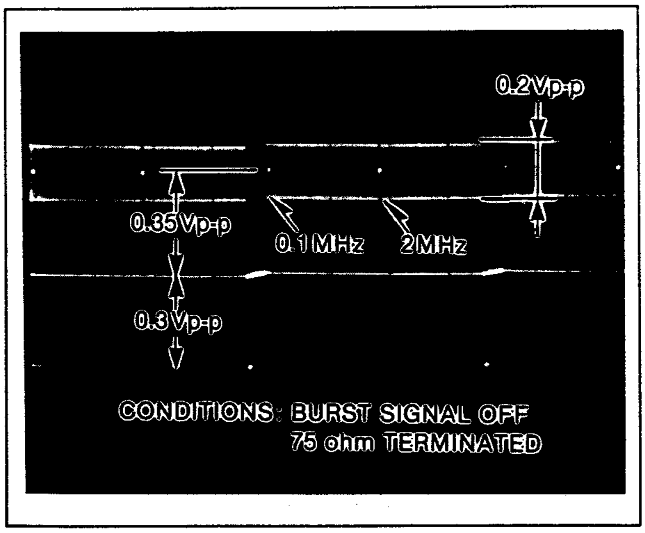


Fig. E7

1. Record the Video Sweep Signal in SP/(LP) mode for a few minutes and playback the just recorded signal.
2. Connect the oscilloscope to TP3002.
3. Adjust VR3012(SP)(VR3013(LP)) until the frequency response level is 0+-1dB at 2MHz portion by comparing with 0.1MHz portion.

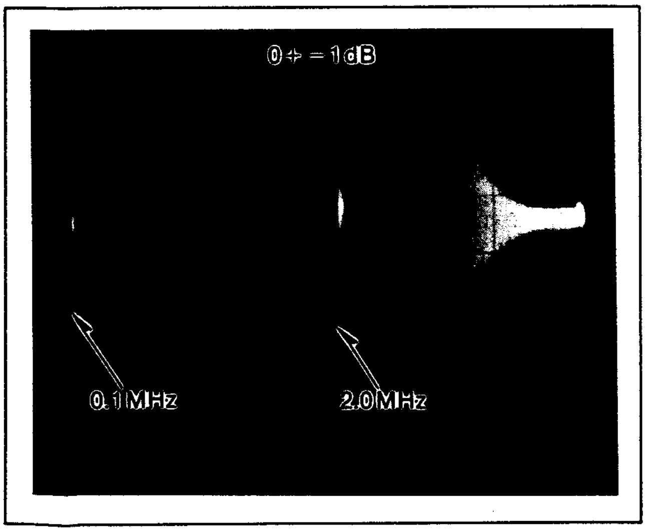


Fig. E8

AUDIO SECTION

2-6-10. BIAS CURRENT ADJUSTMENT

TP	ADJ.	MODE	INPUT
TP4002 (HOT) TP4003 (GND)	VR4002	RECORDING	
TAPE	**M. EQ.**	**SPEC.**	
BLANK TAPE	V.T.V.M.	2.8+-0.1(mVrms) [NV-SD10A/EA/AM] 2.9+-0.1(mVrms) [NV-SD20A/EA ,NV-SD25AM]	

Note:

Connect the Audio input and GND.

1. Place the unit in SP recording mode.
2. Connect the V.T.V.M. to TP4002(HOT) and TP4003(GND).
3. Adjust VR4002 so reading of V.T.V.M. is 2.8+-0.1mVrms[NV-SD10A/EA/AM]/ 2.9+-0.1(mVrms) [NV-SD20A/EA,NV-SD25AM].

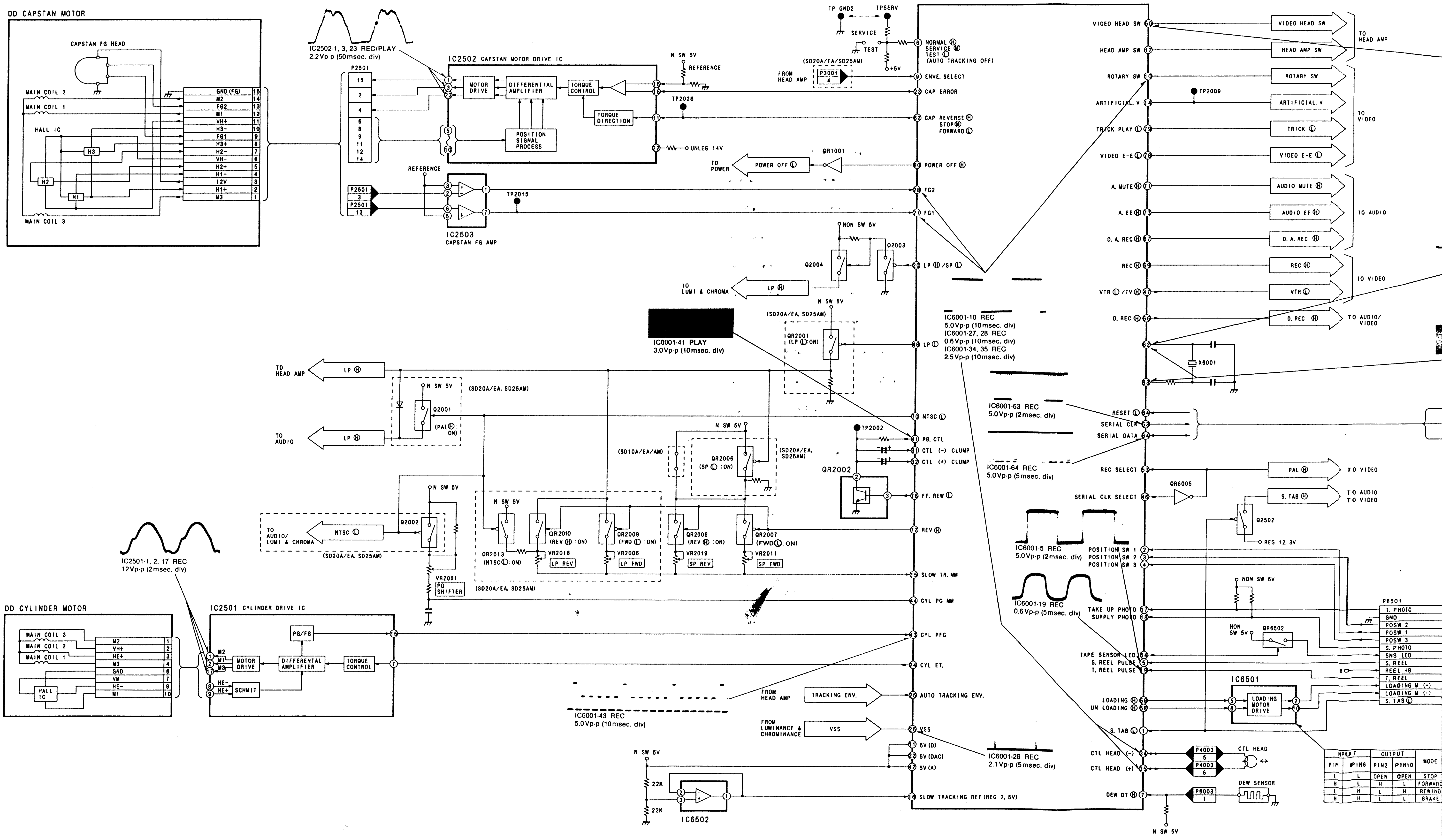
TIMER SECTION

2-6-11. TIMER REFERENCE CLOCK ADJUSTMENT

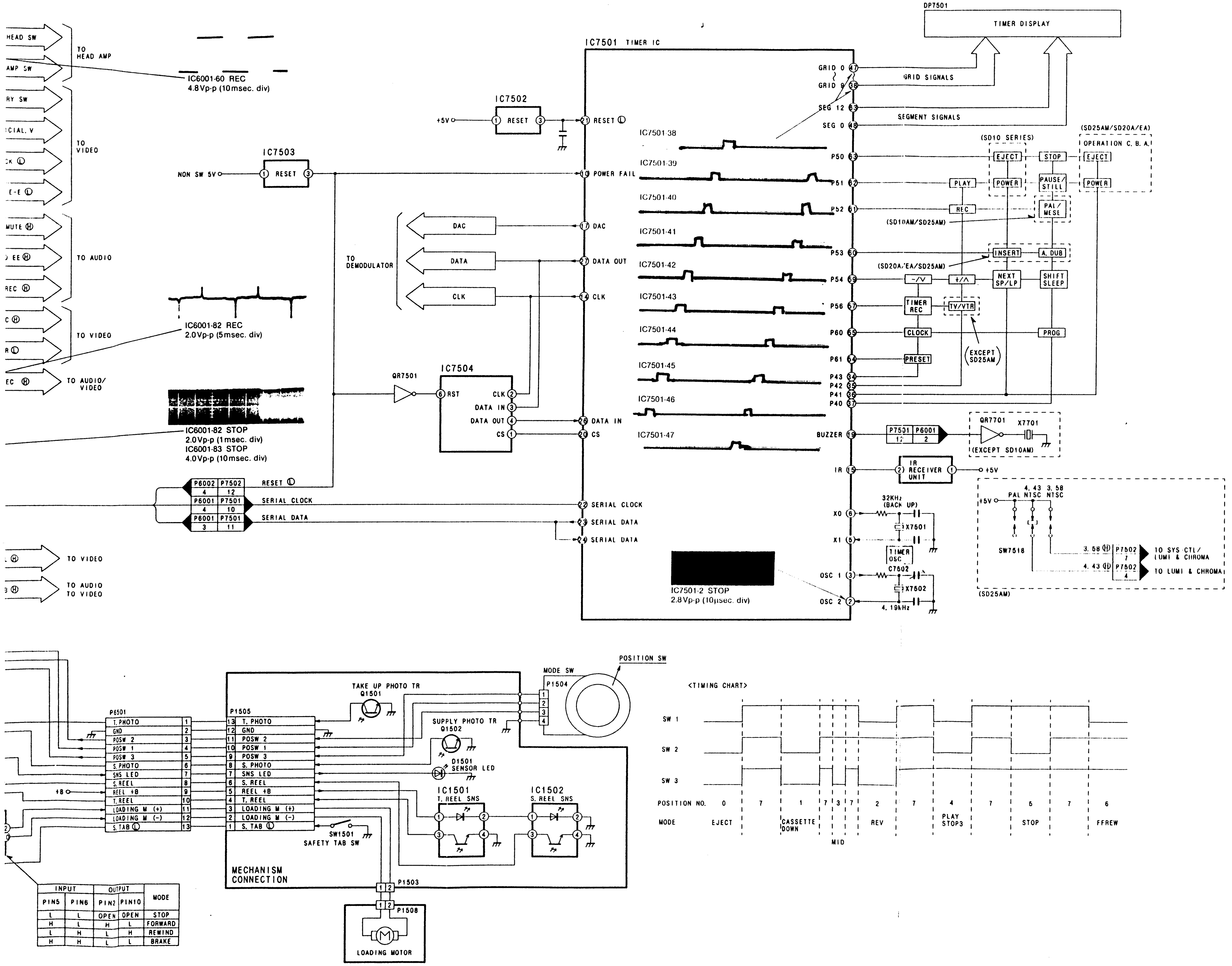
TP	ADJ.	MODE	INPUT
TP7501-28	C7501	STOP	
TAPE	**M. EQ.**	**SPEC.**	
	UNIVERSAL COUNTER	7812.5+-0.015(us)	

1. Connect the universal counter to TP7501-28.
2. Adjust C7501 so the reading of universal counter is 7812.5+-0.015us.

SECTION 3
BLOCK DIAGRAMS
3-1. SYSTEM CONTROL & SERVO BLOCK DIAGRAM


DD CAPSTAN MOTOR
CAPSTAN FG HEAD
MAIN COIL 2
MAIN COIL 1
HALL IC
H1
H2
H3
MAIN COIL 3
GND (FG) 15
M2 14
FG2 13
M1 12
VH+ 11
H3- 10
FG1 9
H3+ 8
H2- 7
VH- 6
H2+ 5
H1- 4
12V 3
H1+ 2
M3 1
IC2502-1, 3, 23 REC/PLAY
2.2Vp-p (50msec. div)
P2501
IC2502 CAPSTAN MOTOR DRIVE IC
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
TORQUE CONTROL
TORQUE DIRECTION
POSITION SIGNAL PROCESS
UNLEG 14V
N. SW 5V
REFERENCE
TP2026
TO POWER
POWER OFF Ⓛ
QR1001
IC2503 CAPSTAN FG AMP
TP2015
TP GND2
TPSERV
SERVICE
TEST
+5V
(SD20A/EA/SD25AM)
FROM HEAD AMP
P3001
IC6001 SYSTEM CONTROL/SERVO IC
NORMAL Ⓗ
SERVICE Ⓜ
TEST Ⓛ
(AUTO TRACKING OFF)
ENVE. SELECT
CAP ERROR
CAP REVERSE Ⓗ
STOP Ⓜ
FORWARD Ⓛ
POWER OFF Ⓗ
FG2
FG1
NON SW 5V
Q2003
Q2004
LP Ⓗ/SP Ⓛ
TO LUMI & CHROMA
LP Ⓗ
N SW 5V
(SD20A/EA. SD25AM)
QR2001 (LP Ⓛ:ON)
LP Ⓛ
IC6001-41 PLAY
3.0Vp-p (10msec. div)
IC6001-10 REC
5.0Vp-p (10msec. div)
IC6001-27, 28 REC
0.6Vp-p (10msec. div)
IC6001-34, 35 REC
2.5Vp-p (10msec. div)
TO HEAD AMP
TO AUDIO
Q2001
(PAL Ⓗ: ON)
NTSC Ⓛ
TP2002
PB. CTL
CTL (-) CLUMP
CTL (+) CLUMP
(SD10A/EA/AM)
QR2006 (SP Ⓛ:ON)
(SD20A/EA. SD25AM)
QR2002
FF. REW Ⓛ
REV Ⓗ
TO AUDIO/ LUMI & CHROMA
NTSC Ⓛ
Q2002
(SD20A/EA. SD25AM)
VR2001 PG SHIFTER
QR2013 (NTSC Ⓛ:ON)
QR2010 (REV Ⓗ:ON)
VR2018 LP REV
QR2009 (FWD Ⓛ:ON)
VR2006 LP FWD
QR2008 (REV Ⓗ:ON)
VR2019 SP REV
QR2007 (FWD Ⓛ:ON)
VR2011 SP FWD
SLOW TR. MM
CYL PG MM
CYL PFG
CYL ET.
IC2501-1, 2, 17 REC
12Vp-p (2msec. div)
DD CYLINDER MOTOR
MAIN COIL 3
MAIN COIL 2
MAIN COIL 1
HALL IC
M2 1
VH+ 2
HE+ 3
M3 4
GND 6
VM 7
HE- 9
M1 10
IC2501 CYLINDER DRIVE IC
PG/FG
MOTOR DRIVE
DIFFERENTIAL AMPLIFIER
TORQUE CONTROL
SCHMIT
FROM HEAD AMP
TRACKING ENV.
AUTO TRACKING ENV.
IC6001-43 REC
5.0Vp-p (10msec. div)
FROM LUMINANCE & CHROMINANCE
VSS
5V (D)
5V (DAC)
5V (A)
22K
22K
IC6502
SLOW TRACKING REF (REG 2. 5V)
IC6001-26 REC
2.1Vp-p (5msec. div)
VIDEO HEAD SW
HEAD AMP SW
ROTARY SW
ARTIFICIAL. V
TRICK PLAY Ⓛ
VIDEO E-E Ⓛ
A. MUTE Ⓗ
A. EE Ⓗ
D. A. REC Ⓗ
REC Ⓗ
VTR Ⓛ/TV Ⓗ
D. REC Ⓗ
TP2009
TO HEAD AMP
TO VIDEO
TO AUDIO
TO VIDEO
TO AUDIO/ VIDEO
VIDEO HEAD SW
HEAD AMP SW
ROTARY SW
ARTIFICIAL. V
TRICK Ⓛ
VIDEO E-E Ⓛ
AUDIO MUTE Ⓗ
AUDIO EE Ⓗ
D. A. REC Ⓗ
REC Ⓗ
VTR Ⓛ
D. REC Ⓗ
X6001
IC6001-63 REC
5.0Vp-p (2msec. div)
RESET Ⓛ
SERIAL CLK
SERIAL DATA
IC6001-64 REC
5.0Vp-p (5msec. div)
REC SELECT
SERIAL CLK SELECT
QR6005
PAL Ⓗ
S. TAB Ⓗ
TO VIDEO
TO AUDIO
TO VIDEO
Q2502
REG 12. 3V
IC6001-5 REC
5.0Vp-p (2msec. div)
POSITION SW 1
POSITION SW 2
POSITION SW 3
IC6001-19 REC
0.6Vp-p (5msec. div)
NON SW 5V
TAKE UP PHOTO
SUPPLY PHOTO
NON SW 5V
QR6502
TAPE SENSOR LED
S. REEL PULSE
T. REEL PULSE
LOADING Ⓗ
UN LOADING Ⓗ
IC6501
LOADING MOTOR DRIVE
S. TAB Ⓛ
CTL HEAD (-)
CTL HEAD (+)
P4003
CTL HEAD
DEW DT Ⓗ
P6003
DEW SENSOR
N SW 5V
P6501
T. PHOTO
GND
POSW 2
POSW 1
POSW 3
S. PHOTO
SNS LED
S. REEL
REEL +B
T. REEL
LOADING M (+)
LOADING M (-)
S. TAB Ⓛ

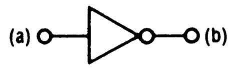
INPUT		OUTPUT		MODE
PIN	PIN6	PIN2	PIN10	
L	L	OPEN	OPEN	STOP
H	L	H	L	FORWARD
L	H	L	H	REWIND
H	H	L	L	BRAKE


HEAD SW
AMP SW
TO HEAD AMP
TO VIDEO
TO AUDIO
TO VIDEO
TO AUDIO/VIDEO
TO VIDEO
TO AUDIO
TO VIDEO
IC6001-60 REC
4.8Vp-p (10msec. div)
IC6001-82 REC
2.0Vp-p (5msec. div)
IC6001-82 STOP
2.0Vp-p (1msec. div)
IC6001-83 STOP
4.0Vp-p (10msec. div)
IC7502
RESET
+5V
IC7503
RESET
NON SW 5V
TO DEMODULATOR
DAC
DATA
CLK
QR7501
IC7504
RST
CLK
DATA IN
DATA OUT
CS
P6002
P7502
P6001
P7501
RESET Ⓛ
SERIAL CLOCK
SERIAL DATA
IC7501 TIMER IC
RESET Ⓛ
POWER FAIL
DAC
DATA OUT
CLK
DATA IN
CS
SERIAL CLOCK
SERIAL DATA
SERIAL DATA
IC7501-38
IC7501-39
IC7501-40
IC7501-41
IC7501-42
IC7501-43
IC7501-44
IC7501-45
IC7501-46
IC7501-47
IC7501-2 STOP
2.8Vp-p (10μsec. div)
GRID 0
GRID 8
SEG 12
SEG 0
P50
P51
P52
P53
P54
P56
P60
P61
P43
P42
P41
P40
BUZZER
IR
XO
X1
OSC 1
OSC 2
DP7501
TIMER DISPLAY
GRID SIGNALS
SEGMENT SIGNALS
(SD10 SERIES)
(SD25AM/SD20A/EA)
OPERATION C. B. A.
EJECT
STOP
EJECT
PLAY
POWER
PAUSE/STILL
POWER
REC
PAL/MESE
(SD10AM/SD25AM)
INSERT
A. DUB
(SD20A/EA/SD25AM)
-/V
+/Λ
NEXT SP/LP
SHIFT SLEEP
TIMER REC
TV/VTR
(EXCEPT SD25AM)
CLOCK
PROG
PRESET
QR7701
X7701
(EXCEPT SD10AM)
IR RECEIVER UNIT
+5V
32KHz (BACK UP)
X7501
TIMER OSC
C7502
X7502
4.19kHz
4.43 PAL
3.58 NTSC
SW7516
3.58 Ⓗ
4.43 Ⓗ
P7502
TO SYS CTL/LUMI & CHROMA
TO LUMI & CHROMA
(SD25AM)
P6501
T.PHOTO
GND
POSW 2
POSW 1
POSW 3
S.PHOTO
SNS LED
S.REEL
REEL +B
T.REEL
LOADING M (+)
LOADING M (-)
S.TAB Ⓛ
+B
P1505
TAKE UP PHOTO TR
Q1501
SUPPLY PHOTO TR
Q1502
D1501
SENSOR LED
IC1501
T. REEL SNS
IC1502
S. REEL SNS
SW1501
SAFETY TAB SW
MECHANISM CONNECTION
MODE SW
P1504
POSITION SW
P1503
P1508
LOADING MOTOR
<TIMING CHART>
SW 1
SW 2
SW 3
POSITION NO.
MODE
EJECT
CASSETTE DOWN
MID
REV
PLAY STOP3
STOP
FFREW

INPUT		OUTPUT		MODE
PIN5	PIN6	PIN2	PIN10	
L	L	OPEN	OPEN	STOP
H	L	H	L	FORWARD
L	H	L	H	REWIND
H	H	L	L	BRAKE

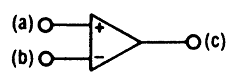
SYMBOL	TRUTH VALUE TABLE

INVERTER



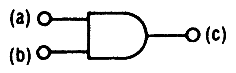
IN	(a)	H	L
OUT	(b)	L	H

COMPARTOR



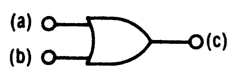
IN	(a) (b)	(a) > (b)	(a) < (b)
OUT	(c)	H	L

AND CIRCUIT



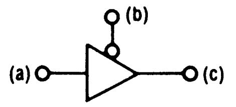
IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	L	L	H

OR CIRCUIT



IN	(a)	L	L	H	H
	(b)	L	H	L	H
OUT	(c)	L	H	H	H

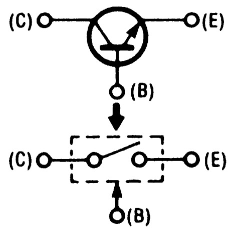
THREE STATES BUFFER



IN	(a)	H	L	H or L
	(b)	L	L	H
OUT	(c)	H	L	※

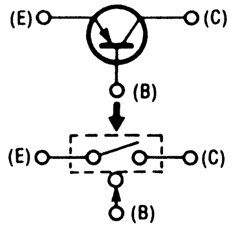
※ High Impedance

TR. SW (NPN TYPE)



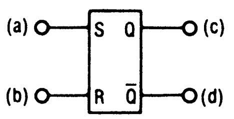
BASE	H	L
TR. SW	ON	OFF

TR. SW (PNP TYPE)



BASE	H	L
TR. SW	OFF	ON

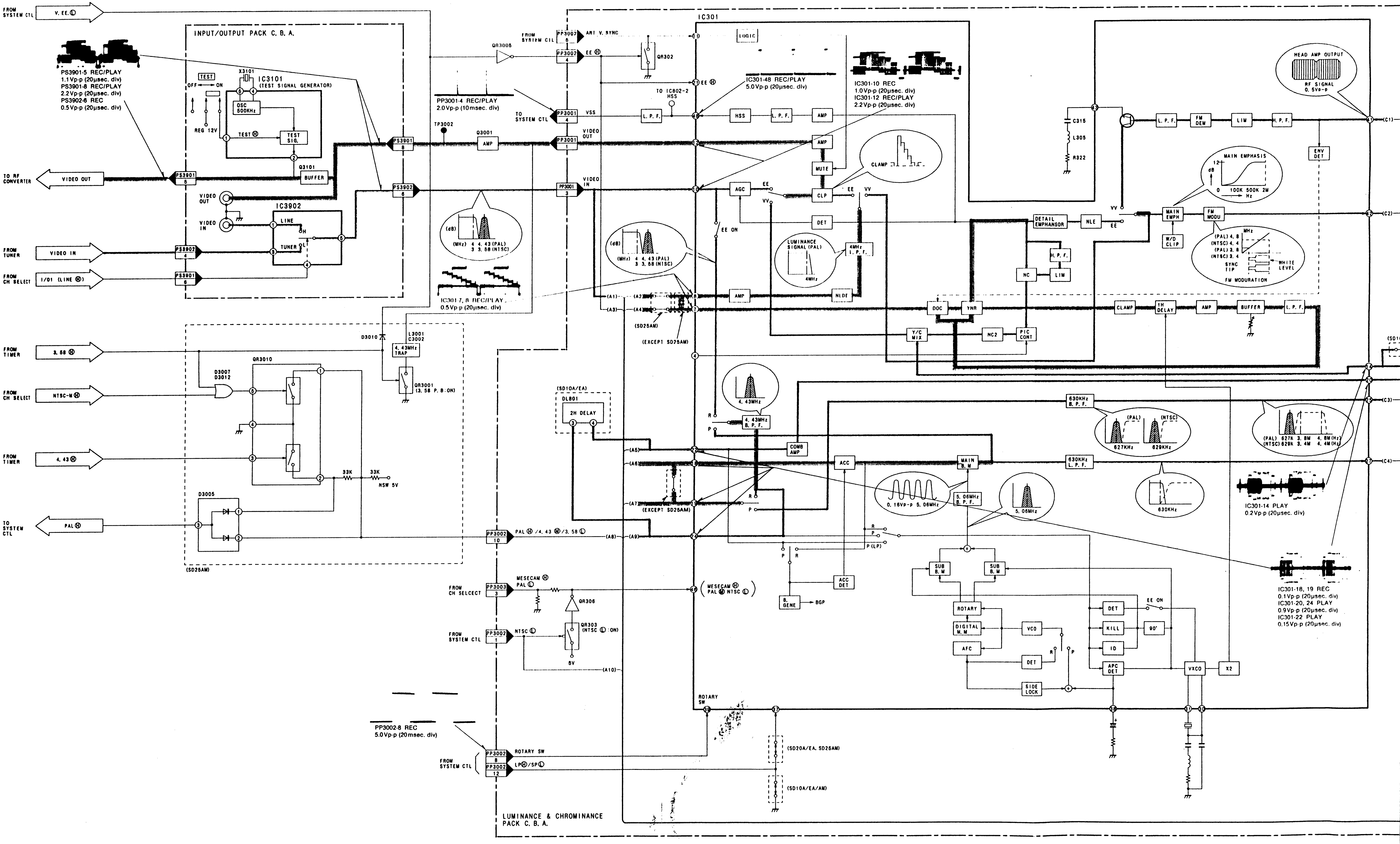
R-S TYPE FLIP-FLOP


(a)
(b)
S
R
Q
$\overline{Q}$
(c)
(d)

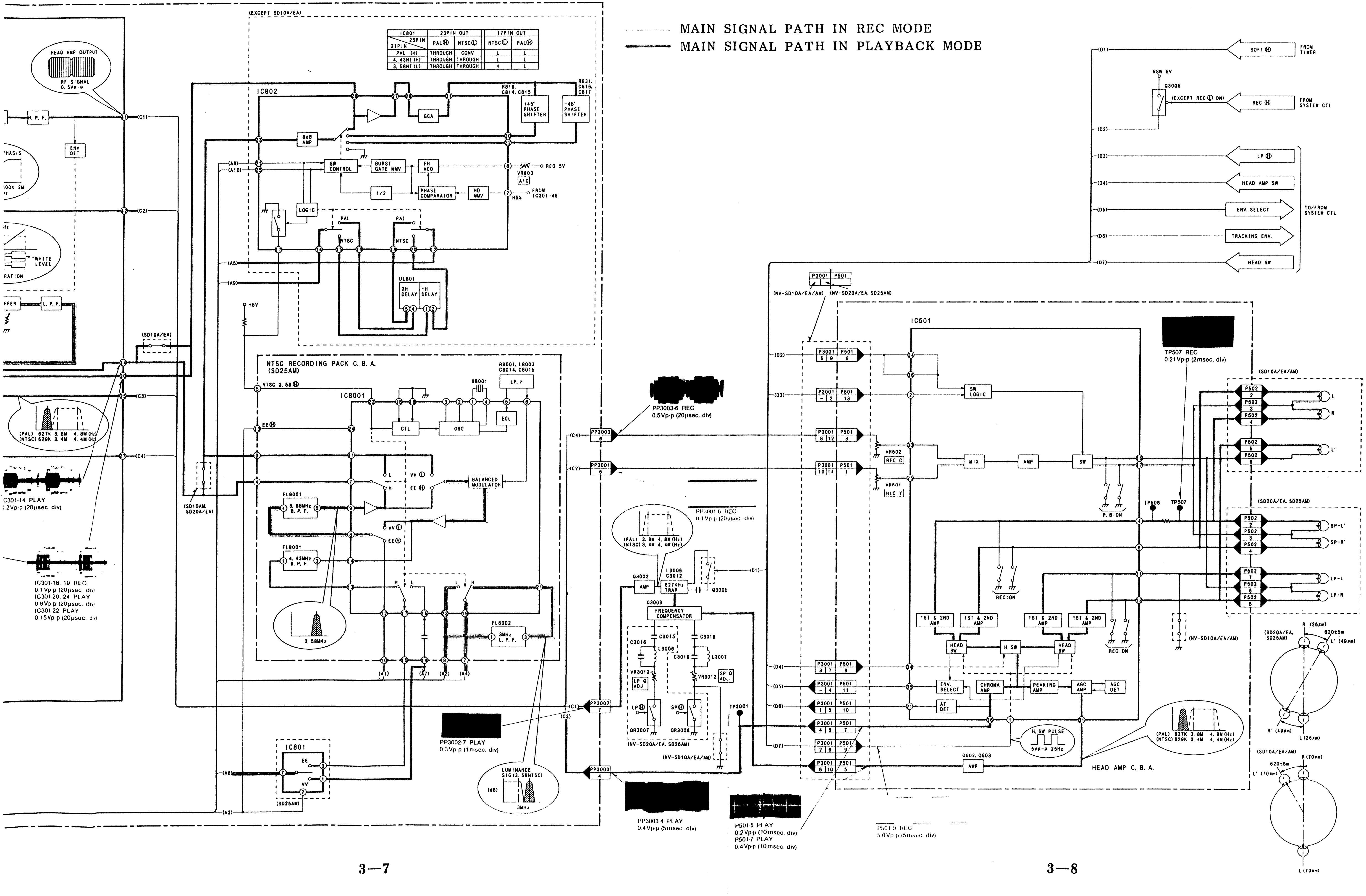
IN	(a)	L	L	⎍
	(b)	L	⎍	L
OUT	(c)	※	L	H
	(d)	◆	H	L

※ Initial condition is maintained.
◆ Initial condition is reversed.

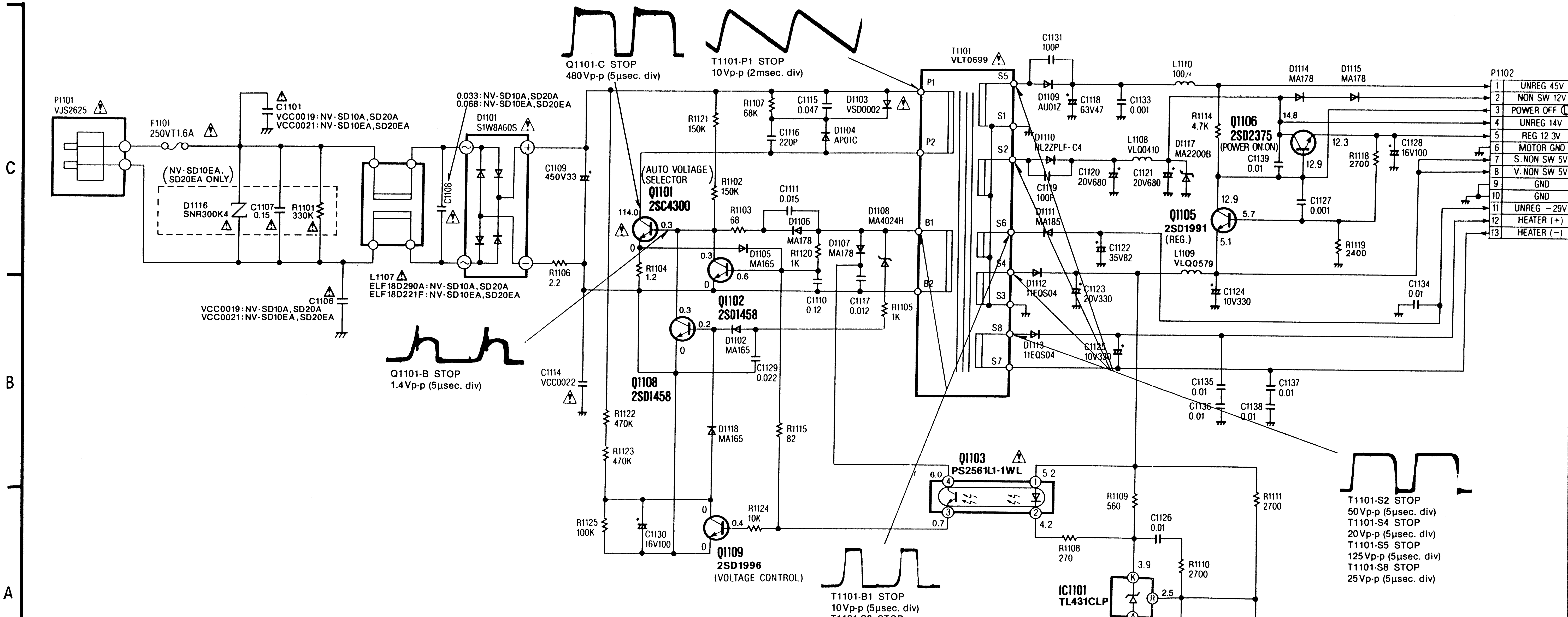
3-2. LUMINANCE & CHROMINANCE BLOCK DIAGRAM


FROM SYSTEM CTL
V. EE. Ⓛ
PS3901-5 REC/PLAY
1.1Vp-p (20μsec. div)
PS3901-8 REC/PLAY
2.2Vp-p (20μsec. div)
PS3902-6 REC
0.5Vp-p (20μsec. div)
INPUT/OUTPUT PACK C. B. A.
TEST
OFF ← → ON
REG 12V
X3101
IC3101
(TEST SIGNAL GENERATOR)
OSC 500KHz
TEST Ⓗ
TEST SIG.
Q3101
BUFFER
TO RF CONVERTER
VIDEO OUT
PS3901 5
VIDEO OUT
VIDEO IN
IC3902
LINE
TUNER
FROM TUNER
VIDEO IN
PS3902 4
FROM CH SELECT
I/01 (LINE Ⓗ)
PS3901 6
PS3901 8
PS3902 6
TP3002
Q3001
AMP
PP3001-4 REC/PLAY
2.0Vp-p (10msec. div)
(dB)
(MHz) 4. 43 (PAL) 3. 58 (NTSC)
IC3017, 8 REC/PLAY
0.5Vp-p (20μsec. div)
FROM SYSTEM CTL
QR3005
PP3002 6
ART V. SYNC
PP3002 4
EE Ⓗ
QR302
TO SYSTEM CTL
PP3001 4
VSS
PP3001 1
VIDEO OUT
PP3001 3
VIDEO IN
TO IC802-2 HSS
L. P. F.
IC301
LOGIC
EE Ⓗ
IC301-48 REC/PLAY
5.0Vp-p (20μsec. div)
IC301-10 REC
1.0Vp-p (20μsec. div)
IC301-12 REC/PLAY
2.2Vp-p (20μsec. div)
HSS
L. P. F.
AMP
AMP
MUTE
CLAMP
AGC
EE
VV
CLP
EE
VV
DET
EE ON
LUMINANCE SIGNAL (PAL)
4MHz
4MHz L. P. F.
(dB)
(MHz) 4 4. 43 (PAL) 3 3. 58 (NTSC)
AMP
NLDE
(A1)
(A2)
(A3)
(A4)
(SD25AM)
(EXCEPT SD25AM)
C315
L305
R322
L. P. F.
FM DEM
LIM
H. P. F.
HEAD AMP OUTPUT
RF SIGNAL 0. 5Vp-p
(C1)
ENV DET
MAIN EMPHASIS
12
dB
0 100K 500K 2M
Hz
VV
EE
DETAIL EMPHANSOR
NLE
MAIN EMPH
W/D CLIP
FM MODU
(C2)
MHz
(PAL) 4. 8
(NTSC) 4. 4
(PAL) 3. 8
(NTSC) 3. 4
SYNC TIP
WHITE LEVEL
FM MODURATION
H. P. F.
NC
LIM
DOC
YNR
CLAMP
1H DELAY
AMP
BUFFER
L. P. F.
Y/C MIX
NC2
PIC CONT
(SD1
FROM TIMER
3. 58 Ⓗ
D3010
L3001 C3002
4. 43MHz TRAP
QR3001
(3. 58 P. B : ON)
QR3010
D3007 D3012
FROM CH SELECT
NTSC-M Ⓗ
FROM TIMER
4. 43 Ⓗ
33K
33K
NSW 5V
D3005
TO SYSTEM CTL
PAL Ⓗ
(SD25AM)
(SD10A/EA)
DL801
2H DELAY
PP3002 10
PAL Ⓗ /4. 43 Ⓜ/3. 58 Ⓛ
(A5)
(A6)
(A7)
(A8)
(A9)
(EXCEPT SD25AM)
4. 43MHz
R
P
4. 43MHz B. P. F.
COMB AMP
ACC
MAIN B. M
630KHz B. P. F.
(PAL)
(NTSC)
627KHz
629KHz
(PAL) 627K 3. 8M 4. 8M (Hz)
(NTSC) 629K 3. 4M 4. 4M (Hz)
(C3)
630KHz L. P. F.
(C4)
630KHz
0. 16Vp-p 5. 06MHz
5. 06MHz B. P. F.
5. 06MHz
IC301-14 PLAY
0.2Vp-p (20μsec. div)
R
P
P (LP)
P
R
ACC DET
B. GENE
BGP
SUB B. M
SUB B. M
ROTARY
DIGITAL M. M
AFC
VCO
DET
SIDE LOCK
R
P
DET
KILL
ID
APC DET
EE ON
90°
VXCO
X2
IC301-18, 19 REC
0.1Vp-p (20μsec. div)
IC301-20, 24 PLAY
0.9Vp-p (20μsec. div)
IC301-22 PLAY
0.15Vp-p (20μsec. div)
FROM CH SELCECT
PP3003 3
MESECAM Ⓗ
PAL Ⓛ
QR306
(MESECAM Ⓗ PAL Ⓜ NTSC Ⓛ)
FROM SYSTEM CTL
PP3002 1
NTSC Ⓛ
QR303
(NTSC Ⓛ : ON)
5V
(A10)
ROTARY SW
(SD20A/EA, SD25AM)
(SD10A/EA/AM)
PP3002-8 REC
5.0Vp-p (20msec. div)
FROM SYSTEM CTL
PP3002 8
ROTARY SW
PP3002 12
LPⒽ/SPⓁ
LUMINANCE & CHROMINANCE PACK C. B. A.

MAIN SIGNAL PATH IN REC MODE
MAIN SIGNAL PATH IN PLAYBACK MODE


(EXCEPT SD10A/EA)
IC801
25PIN
21PIN
23PIN OUT
17PIN OUT
PAL Ⓗ
NTSC Ⓛ
PAL (H)
4.43NT (H)
3.58NT (L)
THROUGH
CONV
HEAD AMP OUTPUT
RF SIGNAL
0.5Vp-p
H.P.F.
ENV DET
IC802
6dB AMP
GCA
+45° PHASE SHIFTER
-45° PHASE SHIFTER
R818, C814, C815
R831, C816, C817
SW CONTROL
BURST GATE MMV
FH VCO
1/2
PHASE COMPARATOR
HD MMV
REG 5V
VR803
AFC
FROM IC301-48
HSS
LOGIC
PAL
NTSC
DL801
2H DELAY
1H DELAY
WHITE LEVEL
L.P.F.
(SD10A/EA)
(SD10AM, SD20A/EA)
+5V
NTSC RECORDING PACK C.B.A. (SD25AM)
NTSC 3.58 Ⓗ
IC8001
X8001
R8001, L8003, C8014, C8015
LP.F
CTL
OSC
ECL
EE Ⓗ
VV Ⓛ
BALANCED MODULATOR
FL8001
3.58MHz B.P.F.
4.43MHz B.P.F.
FL8002
3MHz L.P.F.
3.58MHz
(PAL) 627K 3.8M 4.8M(Hz)
(NTSC) 629K 3.4M 4.4M(Hz)
IC301-14 PLAY
0.2Vp-p (20μsec. div)
IC301-18, 19 REC
0.1Vp-p (20μsec. div)
IC301-20, 24 PLAY
0.9Vp-p (20μsec. div)
IC301-22 PLAY
0.15Vp-p (20μsec. div)
IC801
EE
VV
(SD25AM)
PP3002-7 PLAY
0.3Vp-p (1msec. div)
LUMINANCE SIG (3.58NTSC)
(dB)
3MHz
PP3003-6 REC
0.5Vp-p (20μsec. div)
PP3001-6 REC
0.1Vp-p (20μsec. div)
(PAL) 3.8M 4.8M (Hz)
(NTSC) 3.4M 4.4M (Hz)
Q3002 AMP
L3006 C3012 627KHz TRAP
Q3005
Q3003 FREQUENCY COMPENSATOR
C3015 C3016 L3005 C3018 C3019 L3007
VR3013 LP Q ADJ
VR3012 SP Q ADJ
QR3007
QR3008
TP3001
(NV-SD20A/EA, SD25AM)
(NV-SD10A/EA/AM)
PP3003-4 PLAY
0.4Vp-p (5msec. div)
P501-5 PLAY
0.2Vp-p (10msec. div)
P501-7 PLAY
0.4Vp-p (10msec. div)
P501-9 REC
5.0Vp-p (5msec. div)
SOFT Ⓗ
FROM TIMER
NSW 5V
Q3006
(EXCEPT REC Ⓛ ON)
REC Ⓗ
FROM SYSTEM CTL
LP Ⓗ
HEAD AMP SW
ENV. SELECT
TRACKING ENV.
HEAD SW
TO/FROM SYSTEM CTL
P3001 P501
(NV-SD10A/EA/AM)
(NV-SD20A/EA, SD25AM)
IC501
TP507 REC
0.21Vp-p (2msec. div)
SW LOGIC
VR502 REC C
VR501 REC Y
MIX
AMP
SW
P.B:ON
TP508
TP507
REC:ON
1ST & 2ND AMP
HEAD SW
H SW
ENV. SELECT
CHROMA AMP
PEAKING AMP
AGC AMP
AGC DET
AT DET.
H. SW PULSE
5Vp-p 25Hz
Q502, Q503
AMP
HEAD AMP C.B.A.
(SD10A/EA/AM)
(SD20A/EA, SD25AM)
P502
SP-L'
SP-R'
LP-L
LP-R
R (26μm)
620±5m
L' (49μm)
R' (49μm)
L (26μm)
R (70μm)
L' (70μm)
L (70μm)

SECTION 4
SCHEMATIC DIAGRAMS
4-1. POWER SCHEMATIC DIAGRAM (NV-SD10A/EA, SD20A/EA)


C
B
A
P1101
VJS2625
F1101
250VT1.6A
C1101
VCC0019: NV-SD10A, SD20A
VCC0021: NV-SD10EA, SD20EA
(NV-SD10EA, SD20EA ONLY)
D1116
SNR300K4
C1107
0.15
R1101
330K
C1106
VCC0019: NV-SD10A, SD20A
VCC0021: NV-SD10EA, SD20EA
0.033: NV-SD10A, SD20A
0.068: NV-SD10EA, SD20EA
C1108
D1101
S1W8A60S
L1107
ELF18D290A: NV-SD10A, SD20A
ELF18D221F: NV-SD10EA, SD20EA
C1109
450V33
R1106
2.2
C1114
VCC0022
Q1101-C STOP
480Vp-p (5μsec. div)
T1101-P1 STOP
10Vp-p (2msec. div)
Q1101-B STOP
1.4Vp-p (5μsec. div)
(AUTO VOLTAGE SELECTOR)
Q1101
2SC4300
114.0
0.3
0
R1104
1.2
R1121
150K
R1102
150K
R1107
68K
C1115
0.047
C1116
220P
D1103
VSD0002
D1104
AP01C
C1111
0.015
R1103
68
D1106
MA178
R1120
1K
D1107
MA178
D1108
MA4024H
D1105
MA165
0.6
C1110
0.12
C1117
0.012
R1105
1K
Q1102
2SD1458
0.2
D1102
MA165
C1129
0.022
Q1108
2SD1458
R1122
470K
R1123
470K
R1125
100K
C1130
16V100
D1118
MA165
R1115
82
R1124
10K
0.4
Q1109
2SD1996
(VOLTAGE CONTROL)
T1101
VLT0699
P1
P2
B1
B2
S1
S2
S3
S4
S5
S6
S7
S8
C1131
100P
D1109
AU01Z
C1118
63V47
C1133
0.001
L1110
100μ
D1110
RL2ZPLF-C4
C1119
100P
C1120
20V680
L1108
VLQ0410
C1121
20V680
D1117
MA2200B
D1111
MA185
C1122
35V82
D1112
11EQS04
C1123
20V330
D1113
11EQS04
C1125
10V330
R1114
4.7K
Q1106
2SD2375
(POWER ON: ON)
14.8
12.3
12.9
C1139
0.01
C1127
0.001
Q1105
2SD1991
(REG.)
5.7
5.1
L1109
VLQ0579
C1124
10V330
R1118
2700
C1128
16V100
R1119
2400
C1134
0.01
D1114
MA178
D1115
MA178
C1135
0.01
C1136
0.01
C1137
0.01
C1138
0.01
P1102
1 UNREG 45V
2 NON SW 12V
3 POWER OFF Ⓛ
4 UNREG 14V
5 REG 12.3V
6 MOTOR GND
7 S.NON SW 5V
8 V.NON SW 5V
9 GND
10 GND
11 UNREG -29V
12 HEATER (+)
13 HEATER (-)
Q1103
PS2561L1-1WL
6.0
5.2
0.7
4.2
R1109
560
R1111
2700
C1126
0.01
R1108
270
3.9
2.5
R1110
2700
IC1101
TL431CLP
K
R
A
R1112
2700
R1113
27K
T1101-B1 STOP
10Vp-p (5μsec. div)
T1101-S6 STOP
100Vp-p (5μsec. div)
T1101-S2 STOP
50Vp-p (5μsec. div)
T1101-S4 STOP
20Vp-p (5μsec. div)
T1101-S5 STOP
125Vp-p (5μsec. div)
T1101-S8 STOP
25Vp-p (5μsec. div)

NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT. SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS.
PRIMARY SIDE T1101-B2
SECONDARY SIDE ... TP GND OF MAIN C.B.A.

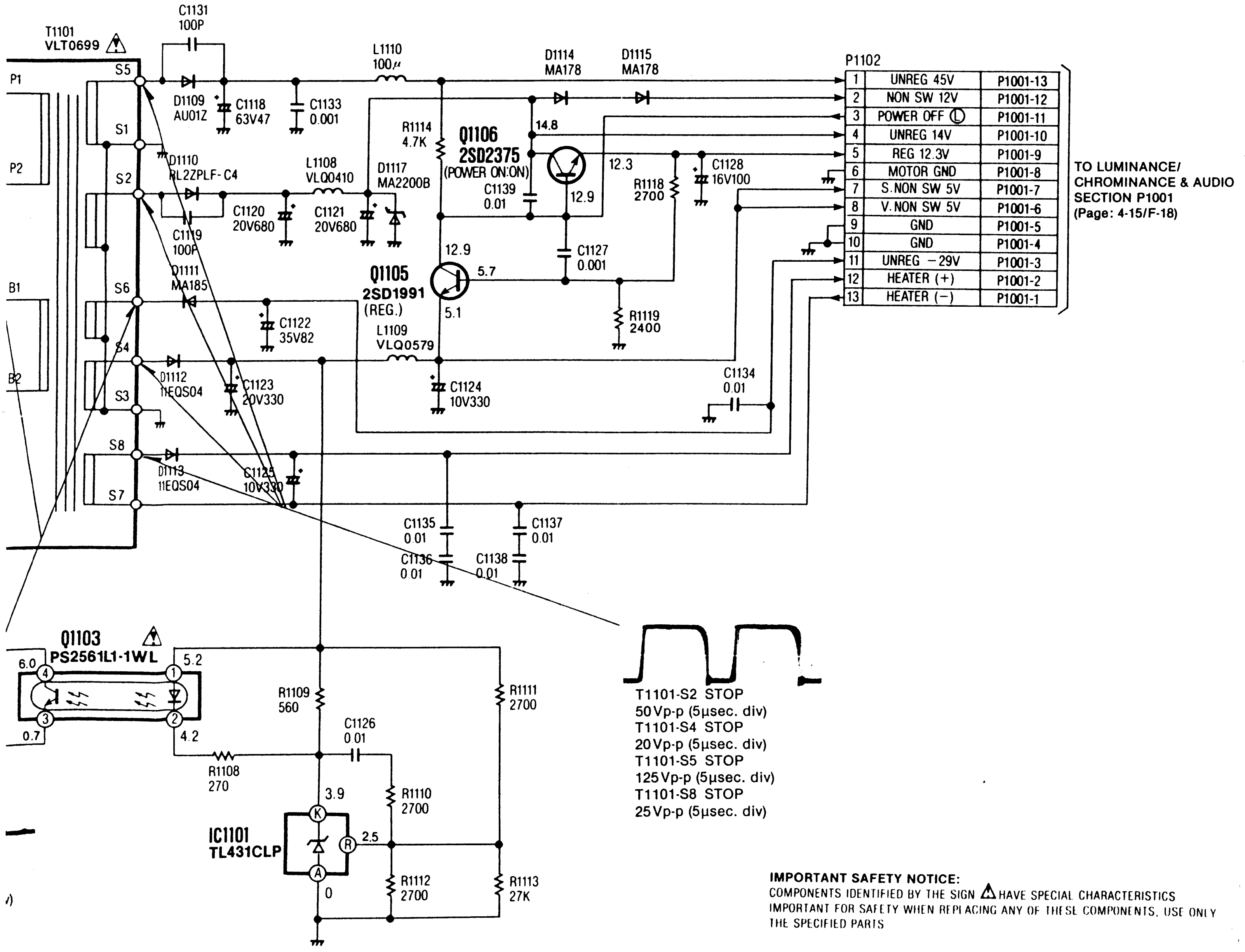
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SI
IMPORTANT FOR SAFETY WHEN REPL
THE SPECIFIED PARTS.

NOTE: DO NOT USE ANY PART NUMBER
ORDERING. WHEN YOU ORDER

1	2	3	4	5	6	7


T1101 VLT0699 ⚠
P1
P2
B1
B2
S5
S1
S2
S6
S4
S3
S8
S7
C1131 100P
D1109 AU01Z
C1118 63V47
C1133 0.001
L1110 100μ
D1114 MA178
D1115 MA178
D1110 RL2ZPLF-C4
L1108 VLQ0410
C1120 20V680
C1121 20V680
C1119 100P
D1111 MA185
R1114 4.7K
D1117 MA2200B
Q1106 2SD2375 (POWER ON:ON)
14.8
12.3
C1139 0.01
12.9
R1118 2700
C1128 16V100
C1127 0.001
Q1105 2SD1991 (REG.)
12.9
5.7
5.1
R1119 2400
L1109 VLQ0579
C1122 35V82
D1112 11EQS04
C1123 20V330
C1124 10V330
C1134 0.01
D1113 11EQS04
C1125 10V330
C1135 0.01
C1137 0.01
C1136 0.01
C1138 0.01
Q1103 ⚠ PS2561L1-1WL
6.0
5.2
0.7
4.2
R1109 560
R1111 2700
R1108 270
C1126 0.01
3.9
R1110 2700
IC1101 TL431CLP
K
R
A
2.5
0
R1112 2700
R1113 27K
P1102
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P1001 (Page: 4-15/F-18)
5
6
7
8

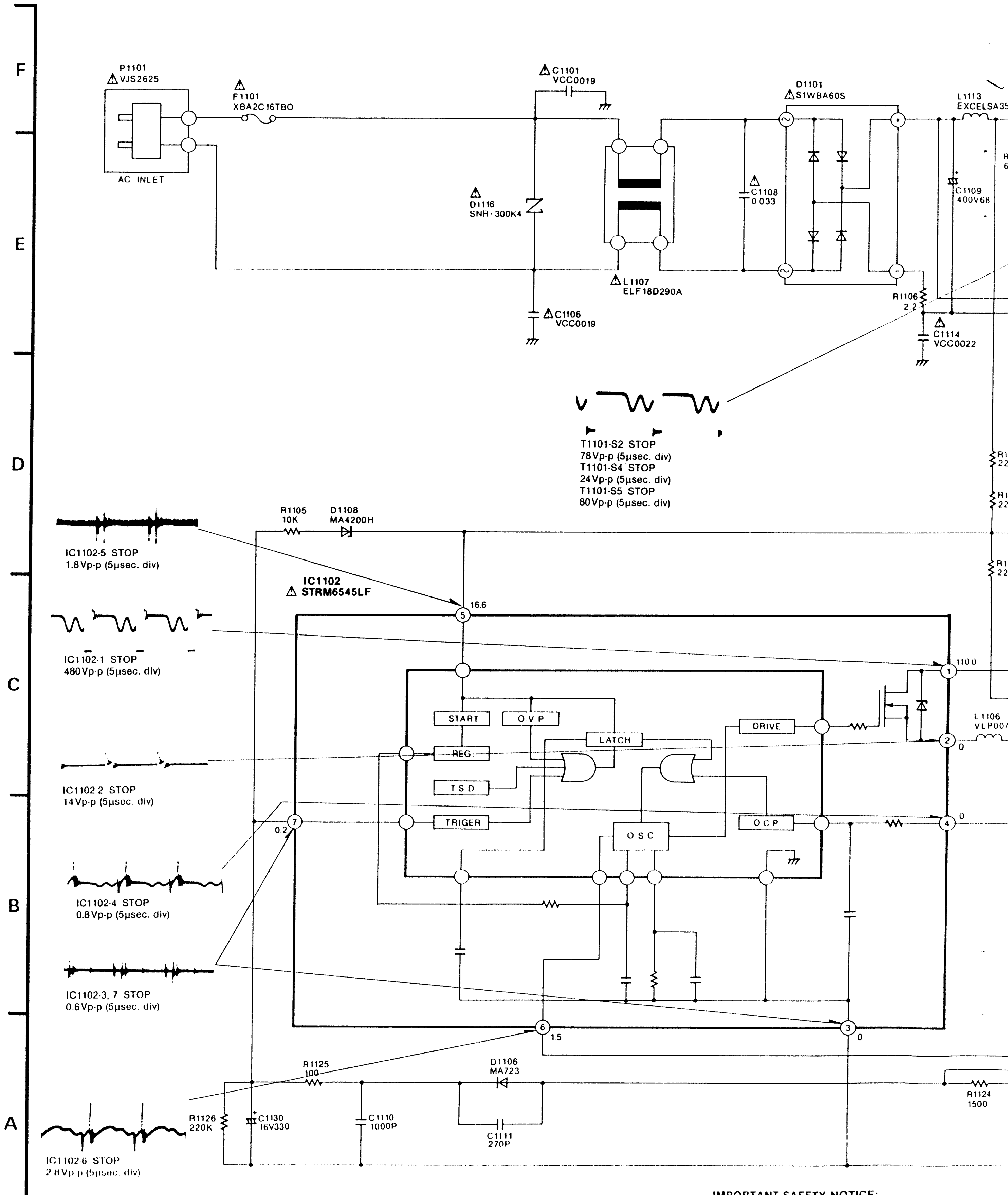
P1102		
1	UNREG 45V	P1001-13
2	NON SW 12V	P1001-12
3	POWER OFF Ⓛ	P1001-11
4	UNREG 14V	P1001-10
5	REG 12.3V	P1001-9
6	MOTOR GND	P1001-8
7	S.NON SW 5V	P1001-7
8	V.NON SW 5V	P1001-6
9	GND	P1001-5
10	GND	P1001-4
11	UNREG −29V	P1001-3
12	HEATER (+)	P1001-2
13	HEATER (−)	P1001-1

T1101-S2 STOP
50Vp-p (5μsec. div)
T1101-S4 STOP
20Vp-p (5μsec. div)
T1101-S5 STOP
125Vp-p (5μsec. div)
T1101-S8 STOP
25Vp-p (5μsec. div)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-2. POWER SCHEMATIC DIAGRAM (NV-SD10AM, SD25AM)


F
E
D
C
B
A
P1101 ⚠ VJS2625
AC INLET
⚠ F1101 XBA2C16TBO
⚠ C1101 VCC0019
D1101 ⚠ S1WBA60S
L1113 EXCELSA35
⚠ D1116 SNR-300K4
⚠ C1108 0.033
C1109 400V68
⚠ L1107 ELF18D290A
⚠ C1106 VCC0019
R1106 22
⚠ C1114 VCC0022
R1105 10K
D1108 MA4200H
16.6
IC1102 ⚠ STRM6545LF
START
O V P
LATCH
DRIVE
REG
T S D
TRIGER
O S C
O C P
1100
0
0
L1106 VLP007
0.2
1.5
0
R1125 100
D1106 MA723
R1124 1500
R1126 220K
C1130 16V330
C1110 1000P
C1111 270P
1
2
3
4

T1101-S2 STOP
78Vp-p (5μsec. div)
T1101-S4 STOP
24Vp-p (5μsec. div)
T1101-S5 STOP
80Vp-p (5μsec. div)

IC1102-5 STOP
1.8Vp-p (5μsec. div)

IC1102-1 STOP
480Vp-p (5μsec. div)

IC1102-2 STOP
14Vp-p (5μsec. div)

IC1102-4 STOP
0.8Vp-p (5μsec. div)

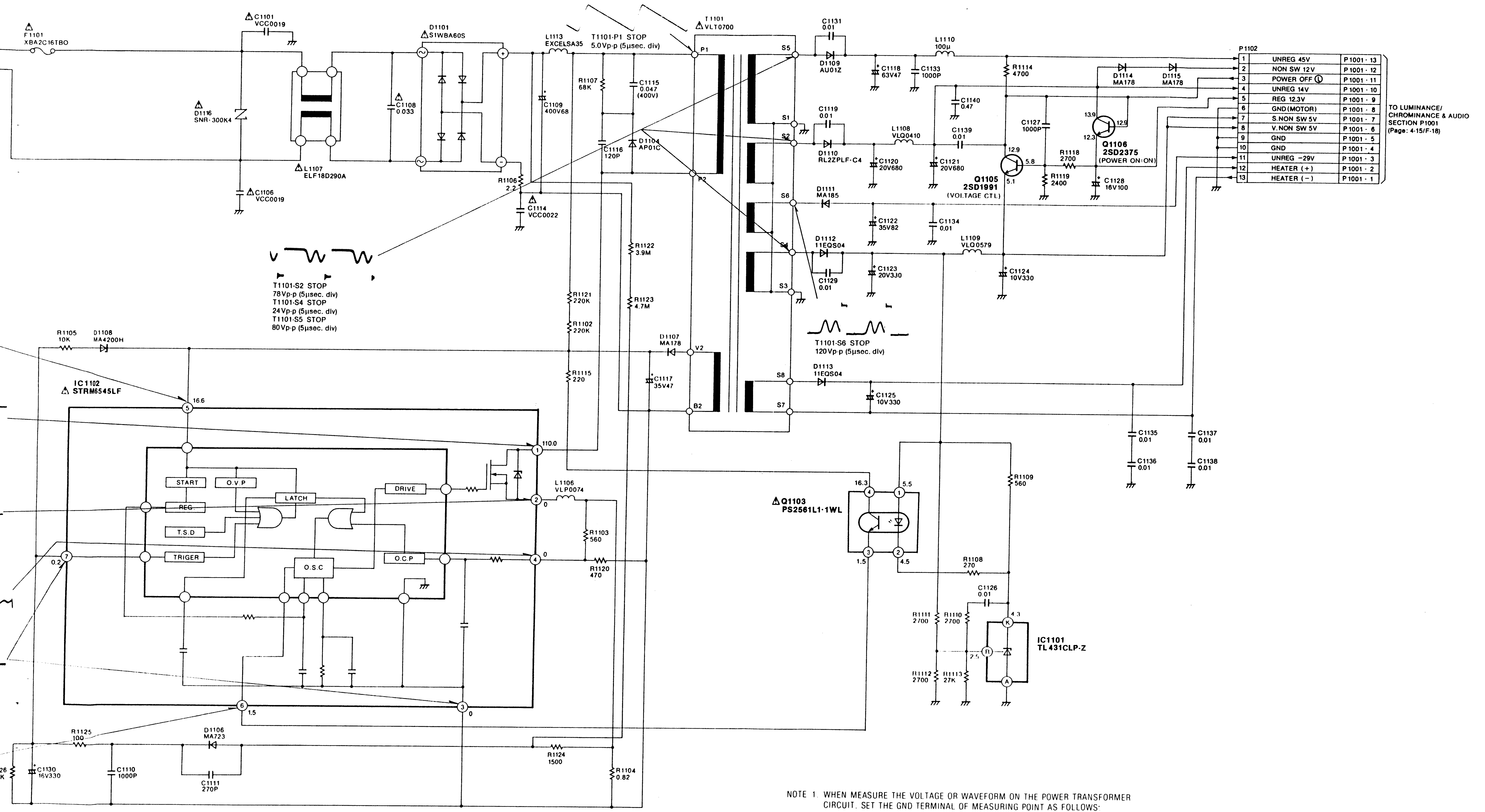
IC1102-3, 7 STOP
0.6Vp-p (5μsec. div)

IC1102-6 STOP
2.8Vp-p (5μsec. div)

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIA
WHEN REPLACING ANY OF THESE COMPONENTS USE ONLY THE

CHEMATIC DIAGRAM (NV-SD10AM, SD25AM)



F1101
XBA2C16TBO
C1101
VCC0019
D1116
SNR-300K4
L1107
ELF18D290A
C1106
VCC0019
C1108
0.033
D1101
S1WBA60S
R1106
2.2
C1114
VCC0022
L1113
EXCELSA35
C1109
400V68
R1107
68K
C1115
0.047
(400V)
C1116
120P
D1104
AP01C
T1101-P1 STOP
5.0Vp-p (5μsec. div)
T1101
VLT0700
P1
P2
V2
B2
S5
S1
S2
S6
S4
S3
S8
S7
T1101-S2 STOP
78Vp-p (5μsec. div)
T1101-S4 STOP
24Vp-p (5μsec. div)
T1101-S5 STOP
80Vp-p (5μsec. div)
R1122
3.9M
R1121
220K
R1123
4.7M
R1102
220K
R1115
220
D1107
MA178
C1117
35V47
C1131
0.01
D1109
AU01Z
C1118
63V47
C1133
1000P
L1110
100μ
R1114
4700
C1119
0.01
D1110
RL2ZPLF-C4
C1120
20V680
L1108
VLQ0410
C1139
0.01
C1140
0.47
C1121
20V680
C1127
1000P
Q1105
2SD1991
(VOLTAGE CTL)
R1118
2700
R1119
2400
D1114
MA178
D1115
MA178
Q1106
2SD2375
(POWER ON:ON)
C1128
16V100
D1111
MA185
C1122
35V82
C1134
0.01
D1112
11EQS04
C1129
0.01
C1123
20V330
L1109
VLQ0579
C1124
10V330
T1101-S6 STOP
120Vp-p (5μsec. div)
D1113
11EQS04
C1125
10V330
C1135
0.01
C1136
0.01
C1137
0.01
C1138
0.01
P1102
1 UNREG 45V P1001 · 13
2 NON SW 12V P1001 · 12
3 POWER OFF Ⓛ P1001 · 11
4 UNREG 14V P1001 · 10
5 REG 12.3V P1001 · 9
6 GND(MOTOR) P1001 · 8
7 S.NON SW 5V P1001 · 7
8 V.NON SW 5V P1001 · 6
9 GND P1001 · 5
10 GND P1001 · 4
11 UNREG −29V P1001 · 3
12 HEATER (+) P1001 · 2
13 HEATER (−) P1001 · 1
TO LUMINANCE/
CHROMINANCE & AUDIO
SECTION P1001
(Page: 4-15/F-18)
R1105
10K
D1108
MA4200H
IC1102
STRM6545LF
16.6
110.0
START
O.V.P
LATCH
REG.
DRIVE
T.S.D
TRIGER
O.S.C
O.C.P
L1106
VLP0074
R1103
560
R1120
470
0.2
1.5
0
Q1103
PS2561L1-1WL
16.3
5.5
4.5
R1109
560
R1108
270
C1126
0.01
4.3
R1111
2700
R1110
2700
R1112
2700
R1113
27K
IC1101
TL431CLP-Z
R1125
100
D1106
MA723
C1130
16V330
C1110
1000P
C1111
270P
R1124
1500
R1104
0.82
12.9
5.8
5.1
13.9
12.9
12.3

E MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK △ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY WHEN REPLACING ANY OF THESE COMPONENTS. USE ONLY THE SAME TYPE.

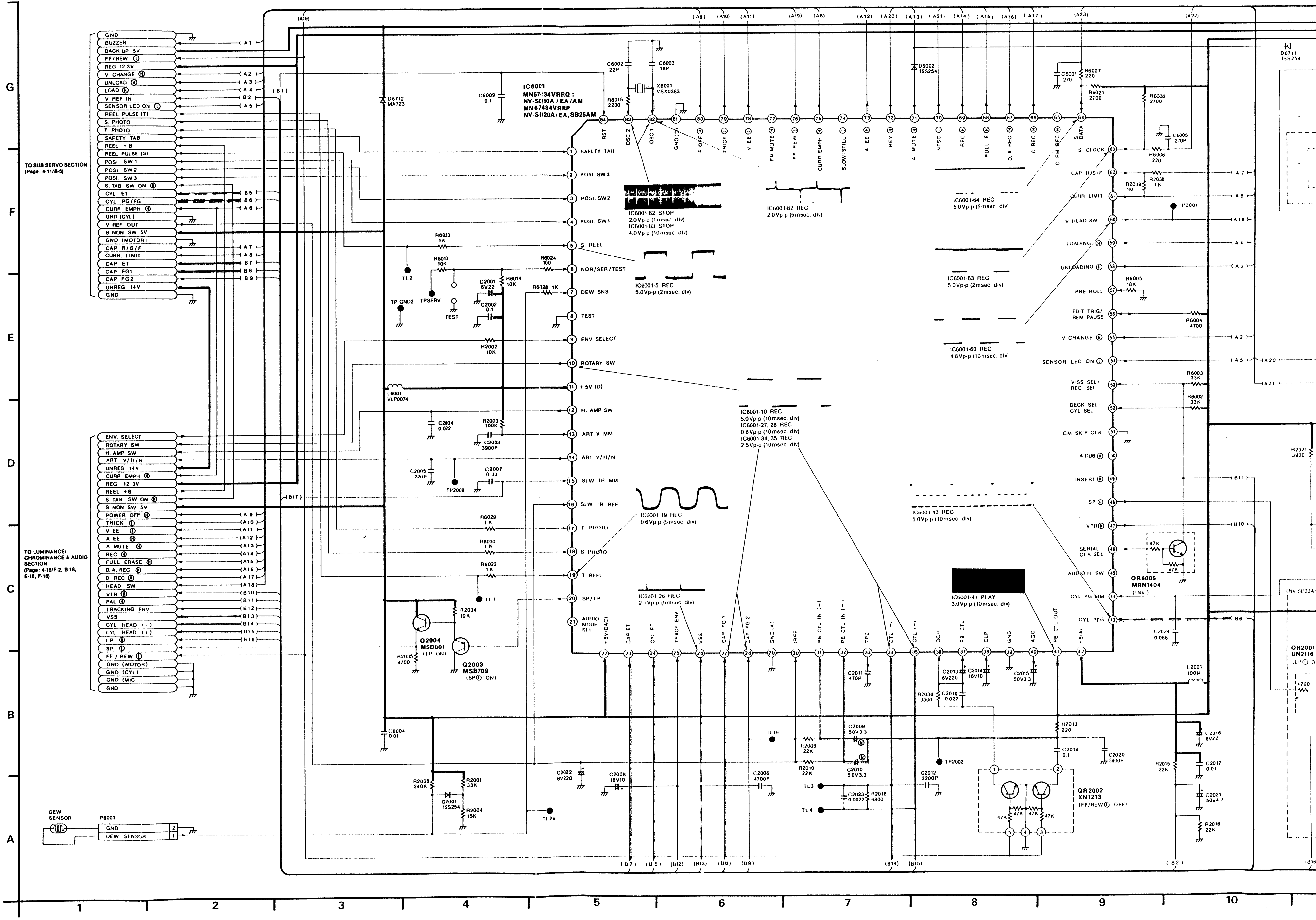
NOTE 1. WHEN MEASURE THE VOLTAGE OR WAVEFORM ON THE POWER TRANSFORMER CIRCUIT. SET THE GND TERMINAL OF MEASURING POINT AS FOLLOWS:
PRIMARY SIDE ...... IC1101-(3)
SECONDARY SIDE .... TP GND OF MAIN C.B.A.

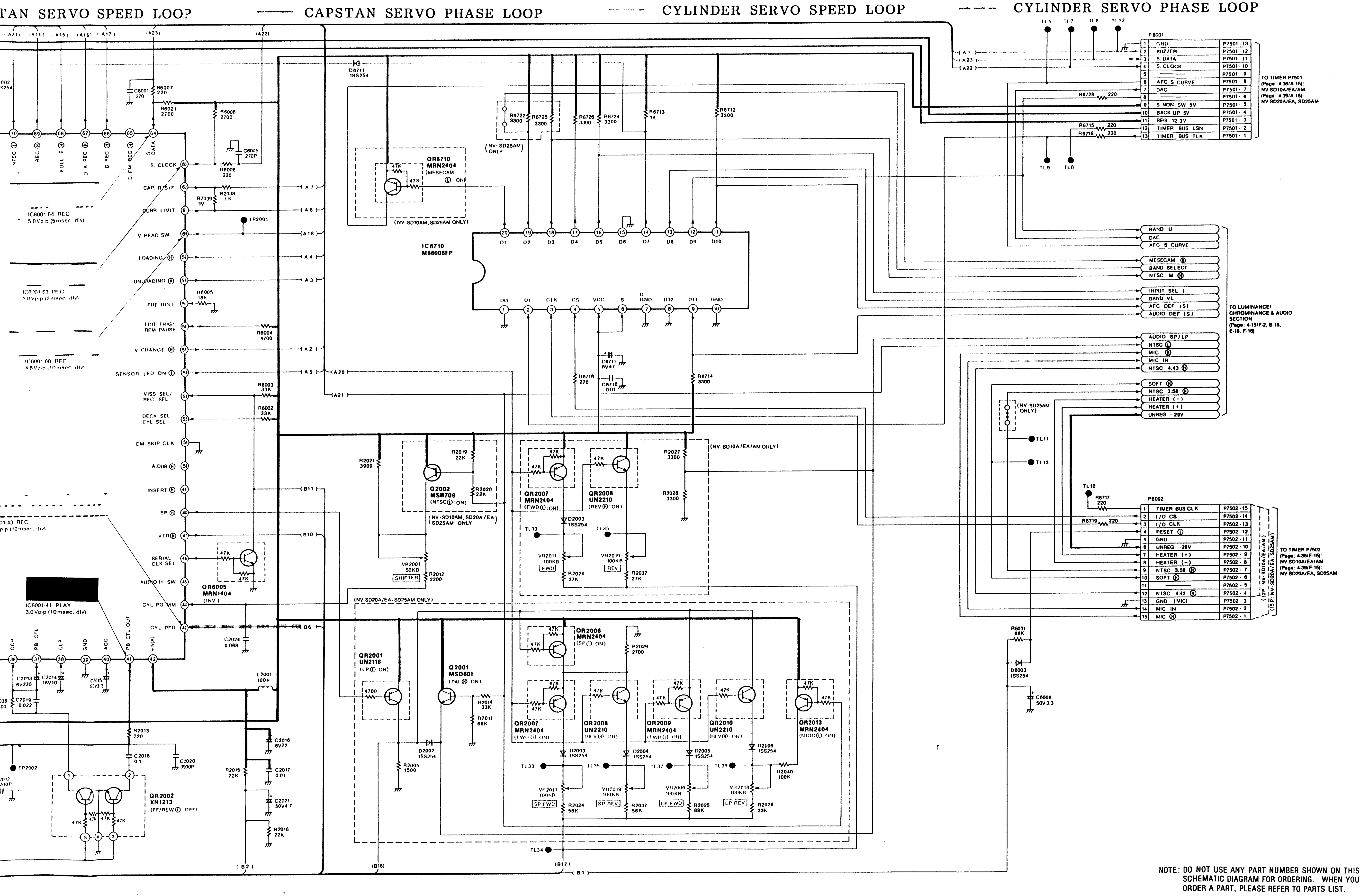
NOTE 2. THE DC VOLTAGE INDICATED IN PRIMARY SIDE IS SHOWN THE VOLTAGE WHEN INPUT AC IS 240V.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-3. SYSTEM CONTROL & SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP — CAPSTAN


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
TO SUB SERVO SECTION (Page: 4-11/B-5)
GND
BUZZER
BACK UP 5V
FF/REW
REG 12.3V
V. CHANGE
UNLOAD
LOAD
V REF IN
SENSOR LED ON
REEL PULSE (T)
S. PHOTO
T. PHOTO
SAFETY TAB
REEL +B
REEL PULSE (S)
POSI SW 1
POSI SW 2
POSI SW 3
S. TAB SW ON
CYL ET
CYL PG/FG
CURR EMPH
GND (CYL)
V REF OUT
S NON SW 5V
GND (MOTOR)
CAP R/S/F
CURR LIMIT
CAP ET
CAP FG1
CAP FG2
UNREG 14V
GND
TO LUMINANCE/CHROMINANCE & AUDIO SECTION (Page: 4-15/F-2, B-18, E-18, F-18)
ENV. SELECT
ROTARY SW
H. AMP SW
ART V/H/N
UNREG 14V
CURR EMPH
REG 12.3V
REEL +B
S TAB SW ON
S NON SW 5V
POWER OFF
TRICK
V EE
A. EE
A. MUTE
REC
FULL ERASE
D.A. REC
D. REC
HEAD SW
VTR
PAL
TRACKING ENV
VSS
CYL HEAD (−)
CYL HEAD (+)
LP
SP
FF/REW
GND (MOTOR)
GND (CYL)
GND (MIC)
GND
DEW SENSOR
P6003
GND
DEW SENSOR
IC6001
MN67434VRRQ : NV-SD10A/EA/AM
MN67434VRRP
NV-SD20A/EA, SB25AM
D6712 MA723
C6009 0.1
C6002 22P
C6003 18P
X6001 VSX0383
R6015 2200
D6002 1SS254
C6001 270
R6007 220
R6021 2700
R6008 2700
C6005 270P
R6006 220
R2039 1M
R6038 1K
TP2001
R6005 18K
R6004 4700
R6003 33K
R6002 33K
D6711 1SS254
R6023 1K
R6013 10K
TL2
TPSERV
TEST
TP GND2
C2001 6V22
R6014 10K
C2002 0.1
R6024 100
R6128 1K
R2002 10K
L6001 VLP0074
C2004 0.022
R2003 100K
C2003 3900P
C2005 220P
TP2009
C2007 0.33
R6029 1K
R6030 1K
R6022 1K
TL1
R2034 10K
Q2004 MSD601 (LP ON)
R2035 4700
Q2003 MSB709 (SP ON)
C6004 0.01
R2008 240K
R2001 33K
D2001 1SS254
R2004 15K
TL29
C2022 6V220
C2008 16V10
TL16
R2009 22K
C2009 50V3.3
R2010 22K
C2010 50V3.3
C2006 4700P
TL3
TL4
C2023 0.0022
R2018 6800
C2012 2200P
TP2002
C2011 470P
R2036 3300
C2013 6V220
C2014 16V10
C2019 0.022
C2015 50V3.3
R2013 220
C2018 0.1
C2020 3900P
QR2002 XN1213 (FF/REW OFF)
47K
QR6005 MRN1404 (INV)
C2024 0.068
L2001 100μ
R2015 22K
C2016 6V22
C2017 0.01
C2021 50V4.7
R2016 22K
R2021 3900
QR2001 UN2116
4700
1 SAFETY TAB
2 POSI SW3
3 POSI SW2
4 POSI SW1
5 S REEL
6 NOR/SER/TEST
7 DEW SNS
8 TEST
9 ENV SELECT
10 ROTARY SW
11 +5V (D)
12 H. AMP SW
13 ART. V MM
14 ART. V/H/N
15 SLW TR MM
16 SLW TR. REF
17 T PHOTO
18 S PHOTO
19 T REEL
20 SP/LP
21 AUDIO MODE SEL
22 -5V(DAC)
23 CAP ET
24 CYL ET
25 TRACK ENV
26 VSS
27 CAP FG1
28 CAP FG2
29 GND (A)
30 IREF
31 PB CTL IN (−)
32 PB CTL IN (+)
33 TP2
34 CTL (+)
35 CTL (−)
36 OCH
37 PB CTL
38 CLP
39 GND
40 AGC
41 PB CTL OUT
42 -5 IA
43 CYL PFG
44 CYL PG MM
45 AUDIO H SW
46 SERIAL CLK SEL
47 VTR
48 SP
49 INSERT
50 A DUB
51 CM SKIP CLK
52 DECK SEL: CYL SEL
53 VISS SEL/ REC SEL
54 SENSOR LED ON
55 V CHANGE
56 EDIT TRIG/ REM PAUSE
57 PRE ROLL
58 UNLOADING
59 LOADING
60 V HEAD SW
61 CURR LIMIT
62 CAP R/S/F
63 S CLOCK
64 S DATA
65 D FM REC
66 D REC
67 D.A. REC
68 FULL E
69 REC
70 NTSC
71 A MUTE
72 REV
73 A EE
74 SLOW STILL
75 CURR EMPH
76 FF REW
77 FM MUTE
78 V EE
79 TRICK
80 P OFF
81 GND (D)
82 OSC 1
83 OSC 2
84 RST
IC6001-82 STOP 2.0Vp-p (1msec. div) IC6001-83 STOP 4.0Vp-p (10msec. div)
IC6001-82 REC 2.0Vp-p (5msec. div)
IC6001-64 REC 5.0Vp-p (5msec. div)
IC6001-5 REC 5.0Vp-p (2msec. div)
IC6001-63 REC 5.0Vp-p (2msec. div)
IC6001-60 REC 4.8Vp-p (10msec. div)
IC6001-10 REC 5.0Vp-p (10msec. div) IC6001-27, 28 REC 0.6Vp-p (10msec. div) IC6001-34, 35 REC 2.5Vp-p (10msec. div)
IC6001-19 REC 0.6Vp-p (5msec. div)
IC6001-43 REC 5.0Vp-p (10msec. div)
IC6001-26 REC 2.1Vp-p (5msec. div)
IC6001-41 PLAY 3.0Vp-p (10msec. div)
A1
A2
A3
A4
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
A16
A17
A18
A19
A20
A21
A22
A23
B1
B2
B5
B6
B7
B8
B9
B10
B11
B12
B13
B14
B15
B16
B17


TAN SERVO SPEED LOOP
CAPSTAN SERVO PHASE LOOP
CYLINDER SERVO SPEED LOOP
CYLINDER SERVO PHASE LOOP
IC6710
M66006FP
QR6710
MRN2404
(MESECAM Ⓛ ON)
(NV-SD10AM,SD25AM ONLY)
(NV-SD25AM ONLY)
D6711
1SS254
R6722 3300
R6725 3300
R6726 3300
R6724 3300
R6713 1K
R6712 3300
R6718 220
R6714 3300
C6711 6V47
C6710 0.01
S CLOCK
CAP R/S/F
CURR LIMIT
V HEAD SW
LOADING Ⓗ
UNLOADING Ⓗ
PRE ROLL
EDIT TRIG/ REM PAUSE
V CHANGE Ⓗ
SENSOR LED ON Ⓛ
VISS SEL/ REC SEL
DECK SEL CYL SEL
CM SKIP CLK
A DUB Ⓗ
INSERT Ⓗ
SP Ⓗ
VTRⒽ
SERIAL CLK SEL
AUDIO H SW
CYL PG MM
CYL PFG
IC6001-64 REC 5.0Vp-p (5msec. div)
IC6001-63 REC 5.0Vp-p (2msec. div)
IC6001-60 REC 4.8Vp-p (10msec. div)
IC6001-41 PLAY 3.0Vp-p (10msec. div)
R6007 220
C6001 270
R6021 2700
R6008 2700
R6006 220
C6005 270P
R2039 1M
R2038 1K
TP2001
R6005 18K
R6004 4700
R6003 33K
R6002 33K
QR6005
MRN1404
(INV.)
C2024 0.068
L2001 100μ
R2013 220
C2018 0.1
C2020 3900P
TP2002
QR2002
XN1213
(FF/REW Ⓛ OFF)
C2016 6V22
C2017 0.01
C2021 50V4.7
R2015 22K
R2016 22K
R2021 3900
Q2002
MSB709
(NTSC Ⓛ ON)
R2019 22K
R2020 22K
(NV-SD10AM, SD20A/EA/ SD25AM ONLY)
VR2001 50KB SHIFTER
R2012 2200
QR2007 MRN2404 (FWD Ⓛ ON)
QR2008 UN2210 (REV Ⓗ ON)
D2003 1SS254
TL33
TL35
VR2011 100KB FWD
VR2019 100KB REV
R2024 27K
R2037 27K
R2027 3300
R2028 3300
(NV-SD10A/EA/AM ONLY)
(NV-SD20A/EA, SD25AM ONLY)
QR2006 MRN2404 (SP Ⓛ ON)
R2029 2700
QR2001 UN2116 (LP Ⓛ ON)
Q2001 MSD601 (PAL Ⓗ ON)
R2014 33K
R2011 68K
D2002 1SS254
R2005 1500
QR2007 MRN2404 (FWD Ⓛ ON)
QR2008 UN2210 (REV Ⓗ ON)
QR2009 MRN2404 (FWD Ⓛ ON)
QR2010 UN2210 (REV Ⓗ ON)
QR2013 MRN2404 (NTSC Ⓛ ON)
D2003 1SS254
D2004 1SS254
D2005 1SS254
D2006 1SS254
TL33 TL35 TL37 TL39
VR2011 100KB SP FWD
VR2019 100KB SP REV
VR2006 100KB LP FWD
VR2018 100KB LP REV
R2024 56K
R2037 56K
R2025 68K
R2026 33K
R2040 100K
TL34
P6001
1 GND P7501-13
2 BUZZER P7501-12
3 S DATA P7501-11
4 S CLOCK P7501-10
5 P7501-9
6 AFC S CURVE P7501-8
7 DAC P7501-7
8 P7501-6
9 S NON SW 5V P7501-5
10 BACK UP 5V P7501-4
11 REG 12.3V P7501-3
12 TIMER BUS LSN P7501-2
13 TIMER BUS TLK P7501-1
TO TIMER P7501 (Page: 4-36/A-15): NV-SD10A/EA/AM (Page: 4-39/A-15): NV-SD20A/EA, SD25AM
R6728 220
R6715 220
R6716 220
TL5 TL7 TL6 TL32 TL9 TL8
BAND U
DAC
AFC S CURVE
MESECAM Ⓗ
BAND SELECT
NTSC M Ⓗ
INPUT SEL 1
BAND VL
AFC DEF (S)
AUDIO DEF (S)
AUDIO SP/LP
NTSC Ⓛ
MIC Ⓗ
MIC IN
NTSC 4.43 Ⓗ
SOFT Ⓗ
NTSC 3.58 Ⓗ
HEATER (−)
HEATER (+)
UNREG −29V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION (Page: 4-15/F-2, B-18, E-18, F-18)
(NV-SD25AM ONLY)
TL11
TL13
TL10
R6717 220
R6719 220
P6002
1 TIMER BUS CLK P7502-15
2 I/O CS P7502-14
3 I/O CLK P7502-13
4 RESET Ⓛ P7502-12
5 GND P7502-11
6 UNREG −29V P7502-10
7 HEATER (+) P7502-9
8 HEATER (−) P7502-8
9 NTSC 3.58 Ⓗ P7502-7
10 SOFT Ⓗ P7502-6
11 P7502-5
12 NTSC 4.43 Ⓗ P7502-4
13 GND (MIC) P7502-3
14 MIC IN P7502-2
15 MIC Ⓗ P7502-1
(12P: NV-SD10A/EA/AM) (15P: NV-SD20A/EA, SD25AM)
TO TIMER P7502 (Page: 4-36/F-15): NV-SD10A/EA/AM (Page: 4-39/F-15): NV-SD20A/EA, SD25AM
R6031 68K
D6003 1SS254
C6008 50V3.3

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

SYSTEM CONTROL & SERVO ICs DC VOLTAGE CHART (SP MODE)

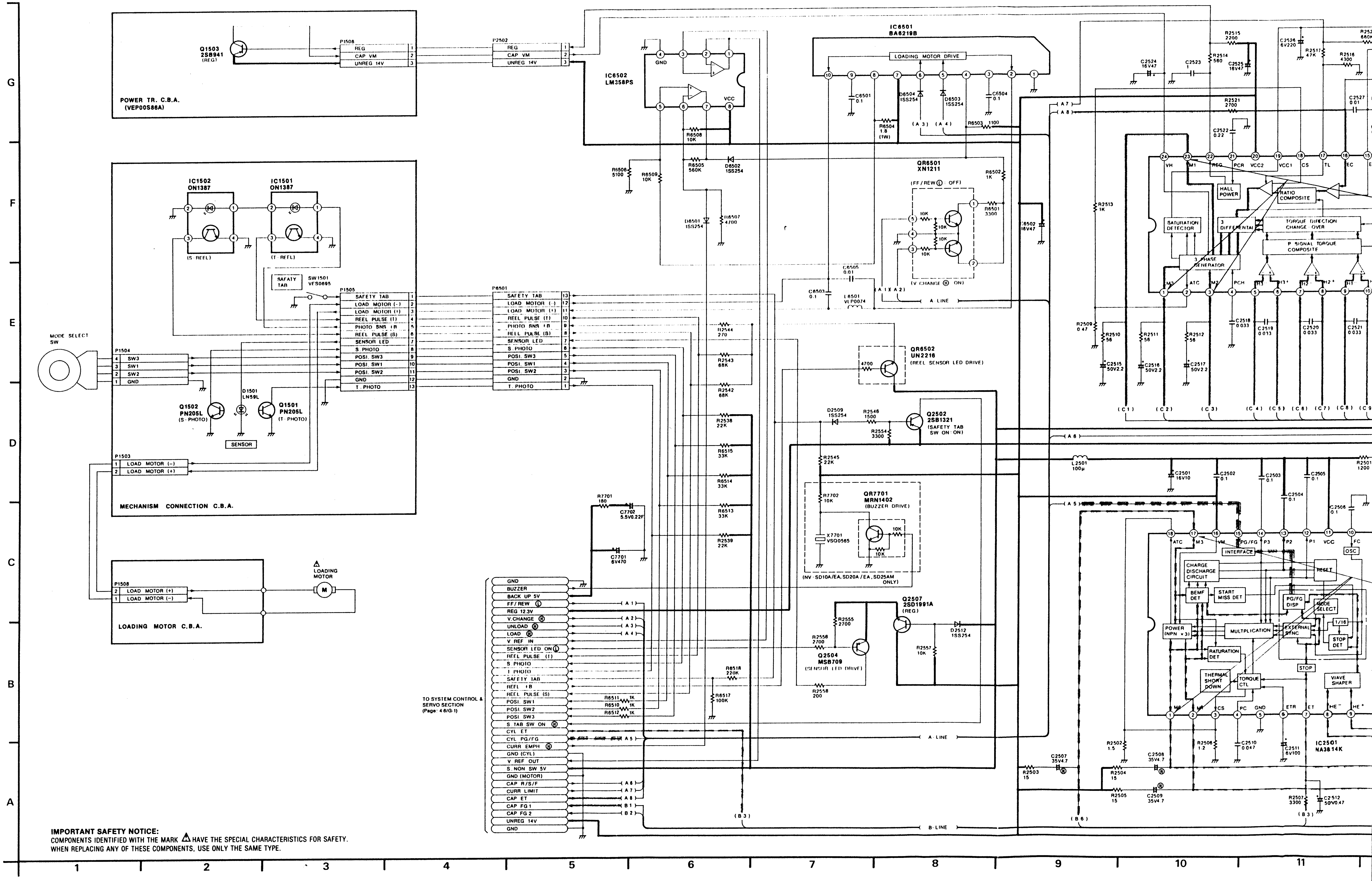
REF. NO.	IC6001																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0.4	4.9	0	4.9	0.1	2.7	0	0	0.4	5.1	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
PLAY	0.1	4.9	0	0	0.1	5.1	0	0	4.0	1.5	5.1	0	0	0	0	2.5	4.8	5.0	5.0	0
REC	0.6	5.0	0	0	4.8	5.1	0	0	4.6	5.0	5.1	0	0	0	0	2.5	5.0	5.0	5.0	0
F.F	0	5.0	4.9	0	2.4	5.1	0	0	3.0	5.1	5.1	0	0	0	0	2.5	4.9	4.9	1.6	0
REW	0	5.1	5.1	0	1.6	5.1	0	0	2.6	5.1	5.1	0	0	0	0	2.5	4.7	4.9	1.7	0
REF. NO.	IC6001																			
MODE	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
STOP	5.0	5.1	0.2	2.5	0.3	2.2	2.0	2.5	0	2.5	2.4	2.0	5.0	0	2.0	2.0	2.0	2.5	2.2	2.5
PLAY	5.1	5.1	2.6	2.4	3.8	2.5	2.5	2.5	0	2.5	2.7	2.4	5.0	0	0	0	2.5	2.5	0	2.8
REC	0	5.1	2.7	2.5	0.4	2.5	2.5	2.5	0	2.5	2.4	2.7	5.0	3.5	3.7	0	2.5	2.5	0	2.5
F.F	5.1	5.1	2.2	2.5	2.7	2.5	2.5	2.5	0	2.5	2.5	2.6	5.0	0	0	0	2.5	1.6	0	2.9
REW	5.1	5.1	2.3	2.4	2.1	2.8	2.1	2.3	0	2.5	2.5	2.6	5.0	2.6	2.6	2.0	2.5	1.8	0	2.9
REF. NO.	IC6001																			
MODE	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60
STOP	2.5	5.1	1.4	3.6	0	4.3	0	5.1	0	0	0	5.0	1.4	5.1	5.0	5.1	0	0	0	0.3
PLAY	2.4	5.1	0.8	3.8	3.8	4.5	0	5.1	0	0	0	0	1.3	0	0	0	0	0	0	0
REC	2.5	5.1	0.8	3.8	0	4.6	0	0	0	0	0	5.1	1.3	0.1	5.1	0	0	0	0	5.1
F.F	2.5	5.1	1.5	3.7	0	4.3	0	5.1	0	0	0	5.1	1.3	0.1	0	5.1	0	0	0	5.1
REW	2.5	5.1	1.1	3.7	0	4.4	0	5.1	0	0	0	4.9	1.0	0.1	0	5.1	0	0	0	5.0
REF. NO.	IC6001																			
MODE	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
STOP	5.1	2.1	4.6	4.0	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	5.0	0	0	5.1	0
PLAY	5.1	0	4.9	4.5	0	0	0	0	0.3	5.1	0	0	0	0	0.1	5.0	0	5.1	5.1	0
REC	5.1	0	4.6	4.4	5.1	5.1	5.1	5.1	5.1	5.1	0	0	5.1	0	0.1	5.0	0	0	5.1	0
F.F	5.1	0	4.6	4.6	0	0	0	0	0.3	5.1	0	0	5.1	0	0.1	0	0	0	5.1	0
REW	5.1	5.1	4.6	4.6	0	0	0	0	0.3	5.1	0	5.1	5.1	0	0.1	0	0	0	5.1	0
REF. NO.	IC6001																			
MODE	81	82	83	84																
STOP	0	2.6	2.6	3.9																
PLAY	0	2.6	2.6	4.1																
REC	0	2.6	2.6	4.3																
F.F	0	2.6	2.6	4.1																
REW	0	2.6	2.6	3.9																
REF. NO.	IC6710																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	4.8	5.1
PLAY	0	3.9	4.9	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	2.2	0	5.1	0.1	0.1	4.8	5.1
REC	0	4.1	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0.1	0.1	4.8	5.1
F.F	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.0	0.1	0.1	4.8	4.8
REW	0	3.9	5.0	5.0	5.1	5.1	0	0	0.1	0	0.1	2.2	0	0.2	0	5.1	0	0.1	4.8	5.1

SYSTEM CONTROL & SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2001			Q2002			Q2003			Q2004								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	2.9	5.1	3.4	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
PLAY	2.9	5.1	3.4	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
REC	2.9	5.1	3.3	5.1	4.7	5.1	0.6	0	0	0.3	5.1	0.6						
F.F	2.9	5.1	3.4	5.1	4.6	5.0	0.6	0	0	0.3	5.1	0.6						
REW	2.9	5.1	3.5	5.1	4.8	5.1	0.6	0	0	0.3	5.1	0.6						
REF. NO.	QR2001			QR2002						QR2006			QR2007			QR2008		
MODE	E	C	B	1	2	3	4	5		E	C	B	E	C	B	E	C	B
STOP	5.1	0.3	5.1	0	0	5.0	1.8	5.0		5.1	5.1	0.3	5.1	0	5.1	0	5.1	5.1
PLAY	5.1	0.2	5.1	0	0	5.0	0	5.0		0	5.1	0.2	5.1	5.1	0	0.3	5.1	0
REC	5.1	0.2	5.1	0	0	5.0	0	5.0		5.1	5.1	0.2	5.1	5.1	0	0.2	5.1	0
F.F	5.1	0.2	5.1	0	2.0	0	0	0		4.3	5.1	0.2	5.1	5.0	0	0.3	5.1	0
REW	5.1	0.3	5.1	0	1.2	0	0	0		5.1	5.1	0.3	5.1	3.0	5.1	4.5	5.1	5.1
REF. NO.	QR2009			QR2010			QR6005			QR6710								
MODE	E	C	B	E	C	B	E	C	B	E	C	B						
STOP	0.3	−0.2	5.1	0.4	0.3	5.1	0	1.1	4.1	5.1	0.3	5.0						
PLAY	0.2	−0.3	0	−0.1	0.2	0	0	1.1	4.1	5.1	0.3	4.9						
REC	0.2	−0.2	0	−0.1	0.2	0	0	1.4	3.7	5.1	0.3	5.1						
F.F	0.2	−3.7	0	−0.1	0.2	0	0	1.4	3.5	5.1	0.3	4.9						
REW	0.4	−1.0	5.1	0.4	0.4	5.1	0	1.4	3.7	5.1	0.3	4.9						

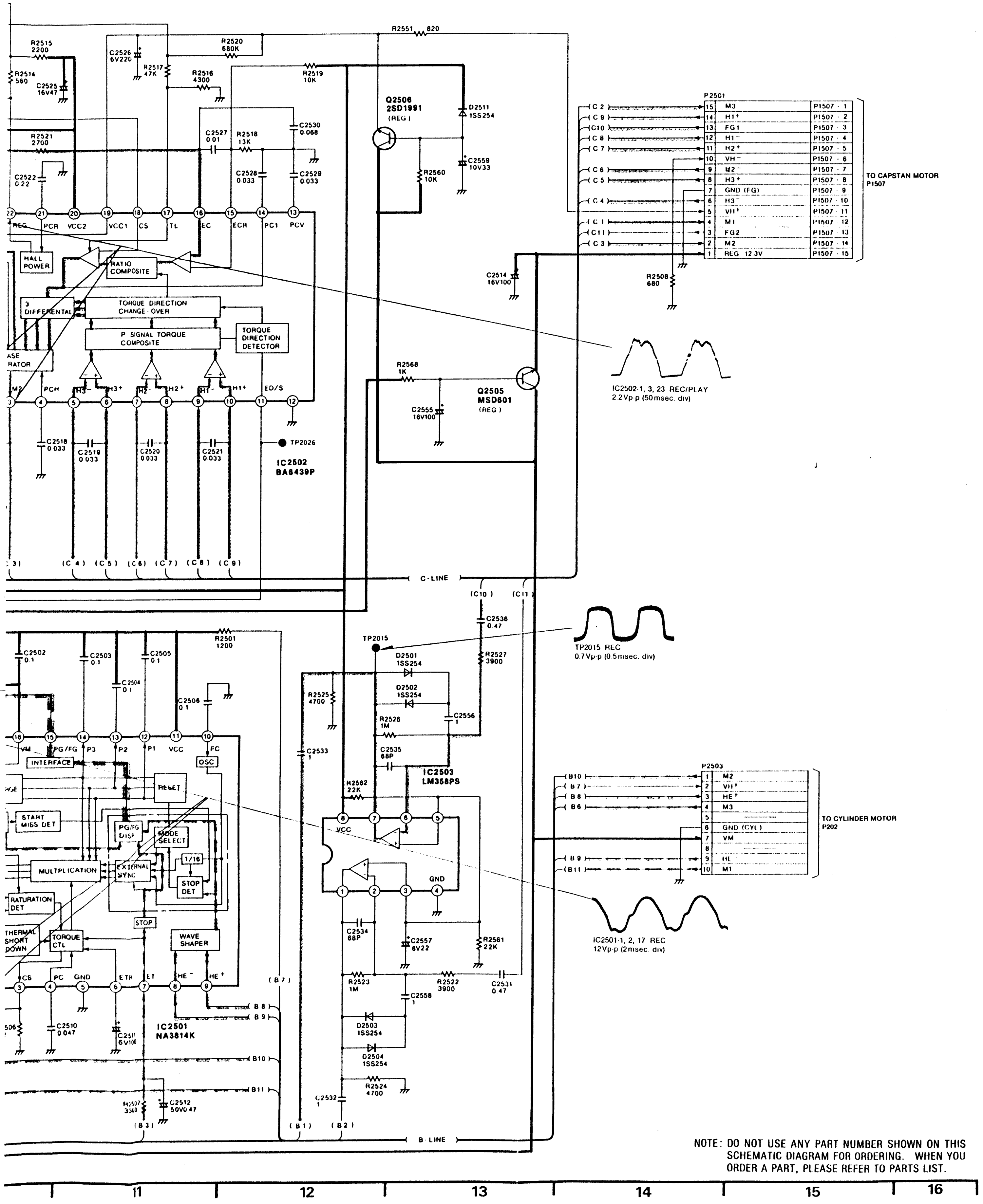
4-4. SUB SERVO SECTION IN MAIN SCHEMATIC DIAGRAM

CAPSTAN SERVO SPEED LOOP — CYLINDER SERVO SPEED LOOP — CY


G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
POWER TR. C.B.A.
(VEP00S86A)
Q1503
2SB941
(REG)
P1508
REG
CAP VM
UNREG 14V
P2502
REG
CAP VM
UNREG 14V
IC6502
LM358PS
GND
VCC
R6508
10K
R6505
560K
D6502
1SS254
R6506
5100
R6509
10K
D6501
1SS254
R6507
4700
IC6501
BA6219B
LOADING MOTOR DRIVE
C6501
0.1
D6504
1SS254
D6503
1SS254
C6504
0.1
R6504
1.8
(1W)
R6503
1100
QR6501
XN1211
(FF/REW Ⓛ : OFF)
(V CHANGE Ⓗ : ON)
R6502
1K
R6501
3300
C6502
16V47
C6505
0.01
C6503
0.1
L6501
VLP0074
A-LINE
IC1502
ON1387
IC1501
ON1387
(S·REEL)
(T·REEL)
SAFATY TAB
SW1501
VFS0695
P1505
SAFETY TAB
LOAD MOTOR (-)
LOAD MOTOR (+)
REEL PULSE (T)
PHOTO SNS LB
REEL PULSE (S)
SENSOR LED
S. PHOTO
POSI. SW3
POSI. SW1
POSI. SW2
GND
T. PHOTO
P6501
MODE SELECT SW
P1504
SW3
SW1
SW2
GND
Q1502
PN205L
(S·PHOTO)
D1501
LN59L
Q1501
PN205L
(T·PHOTO)
SENSOR
P1503
LOAD MOTOR (-)
LOAD MOTOR (+)
MECHANISM CONNECTION C.B.A.
R2544
270
R2543
68K
R2542
68K
R2538
22K
R6515
33K
R6514
33K
R6513
33K
R2539
22K
QR6502
UN2216
(REEL SENSOR LED DRIVE)
4700
D2509
1SS254
R2546
1500
R2554
3300
Q2502
2SB1321
(SAFETY TAB SW ON: ON)
R2545
22K
QR7701
MRN1402
(BUZZER DRIVE)
R7702
10K
X7701
VSG0565
(NV-SD10A/EA, SD20A/EA, SD25AM ONLY)
R7701
180
C7702
5.5V0.22F
C7701
6V470
P1508
LOAD MOTOR (+)
LOAD MOTOR (-)
LOADING MOTOR
LOADING MOTOR C.B.A.
R2555
2700
R2556
2700
Q2504
MSB709
(SENSOR LED DRIVE)
R2558
200
Q2507
2SD1991A
(REG)
D2512
1SS254
R2557
10K
R6518
220K
R6517
100K
GND
BUZZER
BACK UP 5V
FF/REW Ⓛ
REG 12.3V
V.CHANGE Ⓗ
UNLOAD Ⓗ
LOAD Ⓗ
V REF IN
SENSOR LED ON Ⓛ
REEL PULSE (T)
S. PHOTO
T. PHOTO
SAFETY TAB
REEL LB
REEL PULSE (S)
POSI. SW1
POSI. SW2
POSI. SW3
S. TAB SW ON Ⓗ
CYL ET
CYL PG/FG
CURR EMPH Ⓗ
GND (CYL)
V. REF OUT
S. NON SW 5V
GND (MOTOR)
CAP R/S/F
CURR LIMIT
CAP ET
CAP FG1
CAP FG2
UNREG 14V
GND
TO SYSTEM CONTROL & SERVO SECTION
(Page: 4-8/G-1)
R6511
1K
R6510
1K
R6512
1K
B-LINE
R2515
2200
R2514
560
C2526
6V220
R2517
47K
R2516
4300
C2524
16V47
C2523
1
C2525
16V47
R2521
2700
C2527
0.01
C2522
0.22
VH
M1
REG
PCR
VCC2
VCC1
CS
TL
EC
HALL POWER
RATIO COMPOSITE
SATURATION DETECTOR
3 DIFFERENTIAL
TORQUE DIRECTION CHANGE OVER
P SIGNAL TORQUE COMPOSITE
3 PHASE GENERATOR
ATC
PCH
R2513
1K
R2509
0.47
R2510
56
R2511
56
R2512
56
C2515
50V2.2
C2516
50V2.2
C2517
50V2.2
C2518
0.033
C2519
0.013
C2520
0.033
C2521
0.033
L2501
100μ
C2501
16V10
C2502
0.1
C2503
0.1
C2504
0.1
C2505
0.1
C2506
0.1
R2501
1200
VM
PG/FG
P3
P2
P1
VCC
FC
OSC
INTERFACE
CHARGE DISCHARGE CIRCUIT
RESET
BEMF DET
START MISS DET
PG/FG DISP
MODE SELECT
POWER (NPN × 3)
MULTIPLICATION
EXTERNAL SYNC
1/16
STOP DET
RATURATION DET
STOP
THERMAL SHORT DOWN
TORQUE CTL
WAVE SHAPER
CS
PC
GND
ETR
ET
HE⁻
HE⁺
IC2501
NA3814K
R2502
1.5
R2506
1.2
C2510
0.047
C2511
6V100
R2503
15
C2507
35V4.7
R2504
15
C2508
35V4.7
R2505
15
C2509
35V4.7
R2507
3300
C2512
50V0.47
(B3)
(B6)

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

LOOP ---- CYLINDER SERVO PHASE LOOP


R2515 2200
R2514 560
C2525 16V47
C2526 6V220
R2517 47K
R2516 4300
R2520 680K
R2519 10K
R2551 820
R2521 2700
C2522 0.22
C2527 0.01
R2518 13K
C2528 0.033
C2529 0.033
C2530 0.068
Q2506 2SD1991 (REG)
D2511 1SS254
C2559 10V33
R2560 10K
REG PCR VCC2 VCC1 CS TL EC ECR PC1 PCV
HALL POWER
RATIO COMPOSITE
3 DIFFERENTIAL
TORQUE DIRECTION CHANGE-OVER
P SIGNAL TORQUE COMPOSITE
TORQUE DIRECTION DETECTOR
PCH H3⁻ H3⁺ H2⁻ H2⁺ H1⁻ H1⁺ ED/S
C2518 0.033
C2519 0.033
C2520 0.033
C2521 0.033
TP2026
IC2502 BA6439P
R2568 1K
C2555 16V100
Q2505 MSD601 (REG)
C2514 16V100
R2508 680
P2501
15 M3 P1507-1
14 H1⁺ P1507-2
13 FG1 P1507-3
12 H1⁻ P1507-4
11 H2⁺ P1507-5
10 VH⁻ P1507-6
9 H2⁻ P1507-7
8 H3⁺ P1507-8
7 GND (FG) P1507-9
6 H3⁻ P1507-10
5 VH⁺ P1507-11
4 M1 P1507-12
3 FG2 P1507-13
2 M2 P1507-14
1 REG 12.3V P1507-15
TO CAPSTAN MOTOR P1507
IC2502-1, 3, 23 REC/PLAY
2.2Vp-p (50msec. div)
C-LINE
C2536 0.47
TP2015 REC
0.7Vp-p (0.5msec. div)
C2502 0.1
C2503 0.1
C2504 0.1
C2505 0.1
C2506 0.1
R2501 1200
TP2015
D2501 1SS254
D2502 1SS254
R2525 4700
R2526 1M
C2533 1
C2535 68P
C2556 1
R2527 3900
VM PG/FG P3 P2 P1 VCC FC
INTERFACE OSC
RESET
START MISS DET
PG/FG DISP
MODE SELECT
1/16
MULTIPLICATION
EXTERNAL SYNC
STOP DET
SATURATION DET
STOP
THERMAL SHORT DOWN
TORQUE CTL
WAVE SHAPER
CS PC GND ETR ET HE⁻ HE⁺
C2510 0.047
C2511 6V100
IC2501 NA3814K
R2507 3300
C2512 50V0.47
R2562 22K
IC2503 LM358PS
VCC GND
C2534 68P
C2557 6V22
R2561 22K
R2523 1M
R2522 3900
C2531 0.47
C2558 1
D2503 1SS254
D2504 1SS254
R2524 4700
C2532 1
B-LINE
P2503
1 M2
2 VH⁺
3 HE⁺
4 M3
5
6 GND (CYL)
7 VM
8
9 HE⁻
10 M1
TO CYLINDER MOTOR P202
IC2501-1, 2, 17 REC
12Vp-p (2msec. div)
11
12
13
14
15
16

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

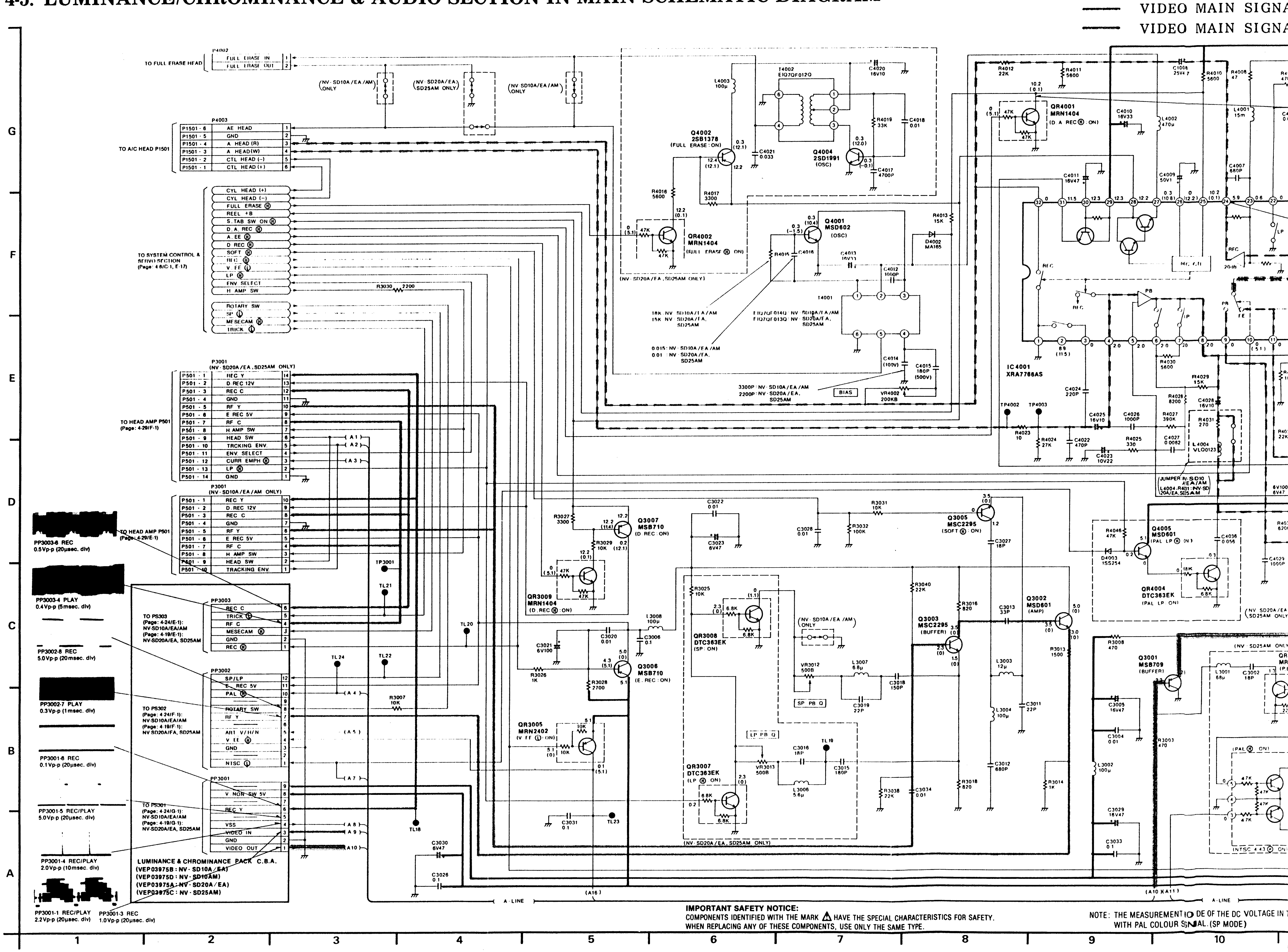
SUB SERVO ICs DC VOLTAGE CHART (SP MODE)

REF. NO.	IC2501																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18		
STOP	14.4	14.4	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.6	3.8	0.8	13.9	14.4	0.1		
PLAY	14.1	12.8	0.1	0.6	0	2.5	2.4	0.6	0.6	2.6	5.1	3.6	3.6	3.6	1.4	13.7	14.2	0.1		
REC	13.7	14.0	0.1	0.6	0	2.5	2.5	0.6	0.6	2.6	5.1	3.6	3.8	3.7	1.4	13.6	14.0	0.1		
F.F	13.0	13.9	0.1	0.5	0	2.5	2.5	0.6	0.6	2.6	5.1	3.7	3.8	3.6	1.1	13.7	14.1	0.1		
REW	12.7	13.9	0.1	0.6	0	2.5	2.5	0.6	0.6	2.7	5.1	3.7	3.7	3.7	1.4	13.6	13.8	0.1		
REF. NO.	IC2502																			
MODE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
STOP	2.0	0	2.0	1.5	2.3	2.3	2.3	2.3	2.3	2.3	2.1	0	0	0.4	2.9	0.2	0.4	0	5.1	13.9
PLAY	2.8	0.1	2.8	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
REC	2.7	0.1	2.7	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.7	0.7	2.9	2.7	0.4	0.1	5.1	13.7
F.F	7.4	0.1	7.1	1.5	2.3	2.3	2.3	2.3	2.3	2.3	0	0	0.6	0.7	2.9	2.5	0.4	0.1	5.1	13.7
REW	7.3	0.1	5.6	1.5	2.3	2.3	2.3	2.3	2.3	2.3	5.1	0	0.7	0.7	2.9	2.4	0.4	0.1	5.0	13.6
REF. NO.	IC2502																			
MODE	21	22	23	24																
STOP	1.3	13.2	2.0	4.5																
PLAY	2.0	12.4	0.1	4.5																
REC	2.0	12.3	0.7	4.5																
F.F	11.5	3.5	7.3	13.5																
REW	11.5	12.2	7.2	13.5																
REF. NO.	IC2503																			
MODE	1	2	3	4	5	6	7	8												
STOP	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
PLAY	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REC	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
F.F	2.5	2.6	2.6	0	2.6	2.6	2.5	5.1												
REW	2.5	2.6	2.6	0	2.6	2.6	2.6	5.1												
REF. NO.	IC6501										IC6502									
MODE	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8		
STOP	0	0.3	0.1	6.7	0	0	13.9	13.9	0.1	0.3	2.5	2.5	2.5	0	4.7	0.7	12.7	13.9		
PLAY	0	0.5	0.1	6.6	0	0	13.7	13.7	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	12.4	13.7		
REC	0	0.3	0.1	6.5	0	0	13.5	13.5	0.1	0.3	2.6	2.6	2.5	0	4.6	0.7	12.3	13.5		
F.F	0	0.2	0.1	13.6	0	0	13.7	13.7	0.1	0.2	2.5	2.5	2.5	0	4.6	0.7	13.1	13.7		
REW	0	0.8	0.4	13.5	0	0	13.6	13.6	0.1	0.5	2.5	2.5	2.5	0	4.6	0.7	13.1	13.6		

SUB SERVO TRANSISTORs DC VOLTAGE CHART (SP MODE)

REF. NO.	Q2502			Q2504			Q2505			Q2506			Q2507					
MODE	E	C	B	E	C	B	E	C	B	E	C	B	E	C	B			
STOP	12.2	12.2	11.5	5.2	−0.1	5.1	11.5	13.9	12.2	5.1	13.9	5.7	5.2	13.9	5.7			
PLAY	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REC	12.2	12.1	11.5	5.0	5.0	4.3	11.5	13.5	12.2	5.1	13.5	5.7	5.0	13.5	5.7			
F.F	12.2	12.2	11.5	5.0	5.0	4.3	11.5	13.7	12.2	5.1	13.7	5.7	5.0	13.7	5.7			
REW	12.2	12.2	11.5	5.0	5.0	4.2	11.5	13.6	12.2	5.1	13.6	5.7	5.0	13.6	5.7			
REF. NO.	QR6501						QR6502											
MODE	1	2	3	4	5		E	C	B									
STOP	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
PLAY	0	0.1	5.0	0	5.0		5.0	5.1	6.8									
REC	0	0.1	5.1	0	5.0		5.1	5.1	9.8									
F.F	13.4	13.6	0	0	0		5.0	5.1	6.8									
REW	13.5	13.5	0	0.1	0		5.0	5.1	6.8									

4-5. LUMINANCE/CHROMINANCE & AUDIO SECTION IN MAIN SCHEMATIC DIAGRAM


VIDEO MAIN SIGNA
VIDEO MAIN SIGNA
TO FULL ERASE HEAD
P4002
FULL ERASE IN
FULL ERASE OUT
TO A/C HEAD P1501
P4003
AE HEAD
GND
A HEAD (R)
A HEAD (W)
CTL HEAD (-)
CTL HEAD (+)
TO SYSTEM CONTROL & SERVO SECTION (Page: 4-8/C-1, E-17)
CYL HEAD (+)
CYL HEAD (-)
FULL ERASE Ⓗ
REEL +B
S.TAB SW ON Ⓗ
D.A. REC Ⓗ
A. EE Ⓗ
D REC Ⓗ
SOFT Ⓗ
REC Ⓗ
V. EE Ⓛ
LP Ⓗ
ENV SELECT
H AMP SW
ROTARY SW
SP Ⓛ
MESECAM Ⓗ
TRICK Ⓛ
TO HEAD AMP P501 (Page: 4-29/F-1)
P3001 (NV-SD20A/EA,SD25AM ONLY)
REC Y
D REC 12V
REC C
GND
RF Y
E REC 5V
RF C
H AMP SW
HEAD SW
TRCKING ENV.
ENV SELECT
CURR EMPH Ⓗ
LP Ⓗ
GND
P3001 (NV-SD10A/EA/AM ONLY)
TRACKING ENV.
TO PS303 (Page: 4-24/E-1): NV-SD10A/EA/AM (Page: 4-19/E-1): NV-SD20A/EA, SD25AM
PP3003
REC C
TRICK Ⓛ
RF C
MESECAM Ⓗ
GND
REC Ⓗ
TO PS302 (Page: 4-24/F-1): NV-SD10A/EA/AM (Page: 4-19/F-1): NV-SD20A/EA, SD25AM
PP3002
SP/LP
E REC 5V
PAL Ⓗ
ROTARY SW
RF Y
ART V/H/N
V. EE Ⓗ
GND
NTSC Ⓛ
TO PS301 (Page: 4-24/G-1): NV-SD10A/EA/AM (Page: 4-19/G-1): NV-SD20A/EA, SD25AM
PP3001
V. NON-SW 5V
REC Y
VSS
VIDEO IN
GND
VIDEO OUT
LUMINANCE & CHROMINANCE PACK C.B.A.
(VEP03975B : NV-SD10A/EA)
(VEP03975D : NV-SD10AM)
(VEP03975A : NV-SD20A/EA)
(VEP03975C : NV-SD25AM)
PP3003-6 REC 0.5Vp-p (5μsec. div)
PP3003-4 PLAY 0.4Vp-p (5msec. div)
PP3002-8 REC 5.0Vp-p (20msec. div)
PP3002-7 PLAY 0.3Vp-p (1msec. div)
PP3001-8 REC 0.1Vp-p (20μsec. div)
PP3001-5 REC/PLAY 5.0Vp-p (20μsec. div)
PP3001-4 REC/PLAY 2.0Vp-p (10msec. div)
PP3001-1 REC/PLAY 2.2Vp-p (20μsec. div)
PP3001-3 REC 1.0Vp-p (20μsec. div)
Q4002 2SB1378 (FULL ERASE : ON)
Q4004 2SD1991 (OSC)
T4002 EIQ7OF012O
QR4002 MRN1404 (FULL ERASE Ⓗ : ON)
Q4001 MSD602 (OSC)
T4001
(NV-SD20A/EA,SD25AM ONLY)
18K : NV-SD10A/EA/AM
15K : NV-SD20A/EA, SD25AM
EIQ7OF014Q : NV-SD10A/EA/AM
EIQ7OF013Q : NV-SD20A/EA, SD25AM
0.015 : NV-SD10A/EA/AM
0.01 : NV-SD20A/EA, SD25AM
3300P : NV-SD10A/EA/AM
2200P : NV-SD20A/EA, SD25AM
BIAS
VR4002 200KB
QR4001 MRN1404 (D.A. REC Ⓗ : ON)
IC4001 XRA7766AS
TP4002
TP4003
JUMPER : NV-SD10A/EA/AM
L4004, R4031 : NV-SD20A/EA, SD25AM
Q3007 MSB710 (D.REC : ON)
QR3009 MRN1404 (D.REC Ⓗ : ON)
Q3006 MSB710 (E.REC : ON)
QR3005 MRN2402 (V.EE Ⓛ : ON)
QR3008 DTC363EK (SP : ON)
QR3007 DTC363EK (LP Ⓗ : ON)
(NV-SD20A/EA, SD25AM ONLY)
SP PB Q
LP PB Q
Q3005 MSC2295 (SOFT Ⓗ : ON)
Q3003 MSC2295 (BUFFER)
Q3002 MSD601 (AMP)
Q4005 MSD601 (PAL LP Ⓗ : ON)
QR4004 DTC363EK (PAL LP : ON)
Q3001 MSB709 (BUFFER)
D4003 1SS254
D4002 MA165
TP3001
TL18
TL19
TL20
TL21
TL22
TL23
TL24
A-LINE
(A16)
(A10)(A11)
G
F
E
D
C
B
A
1
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IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

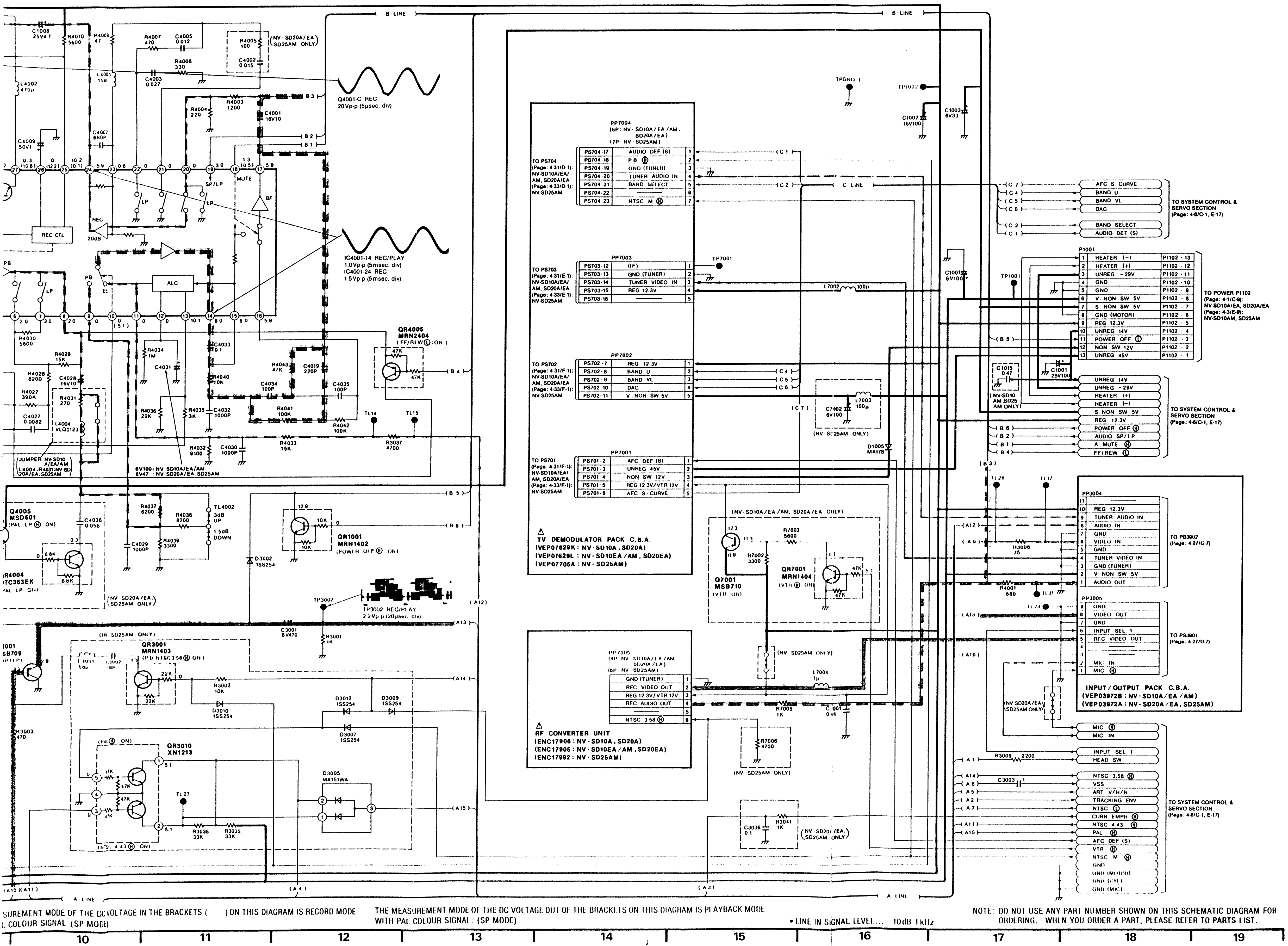
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN
WITH PAL COLOUR SIGNAL. (SP MODE)

IDEO MAIN SIGNAL PATH IN REC MODE

IDEO MAIN SIGNAL PATH IN PLAYBACK MODE

AUDIO MAIN SIGNAL PATH IN REC MODE

AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE


B LINE
Q4001-C REC
20Vp-p (5μsec. div)
IC4001-14 REC/PLAY
1.0Vp-p (5msec. div)
IC4001-24 REC
1.5Vp-p (5msec. div)
REC CTL
ALC
MUTE
SP/LP
QR4005
MRN2404
(FF/REW Ⓛ ON)
QR1001
MRN1402
(POWER OFF Ⓗ ON)
TP3002
TP3002 REC/PLAY
2.2Vp-p (20μsec. div)
QR3001
MRN1403
QR3010
XN1213
D3005
MA151WA
Q4005
MSD601
(PAL LP Ⓗ ON)
JUMPER : NV-SD10A/EA/AM
TV DEMODULATOR PACK C.B.A.
(VEP07629K : NV-SD10A, SD20A)
(VEP07629L : NV-SD10EA/AM, SD20EA)
(VEP07705A : NV-SD25AM)
RF CONVERTER UNIT
(ENC17906 : NV-SD10A, SD20A)
(ENC17905 : NV-SD10EA/AM, SD20EA)
(ENC17992 : NV-SD25AM)
Q7001
MSB710
QR7001
MRN1404
(VTR Ⓗ ON)
INPUT/OUTPUT PACK C.B.A.
(VEP03972B : NV-SD10A/EA/AM)
(VEP03972A : NV-SD20A/EA, SD25AM)
TO SYSTEM CONTROL & SERVO SECTION
TO POWER P1102
TO PS3002
TO PS3001
C LINE
A LINE
10
11
12
13
14
15
16
17
18
19

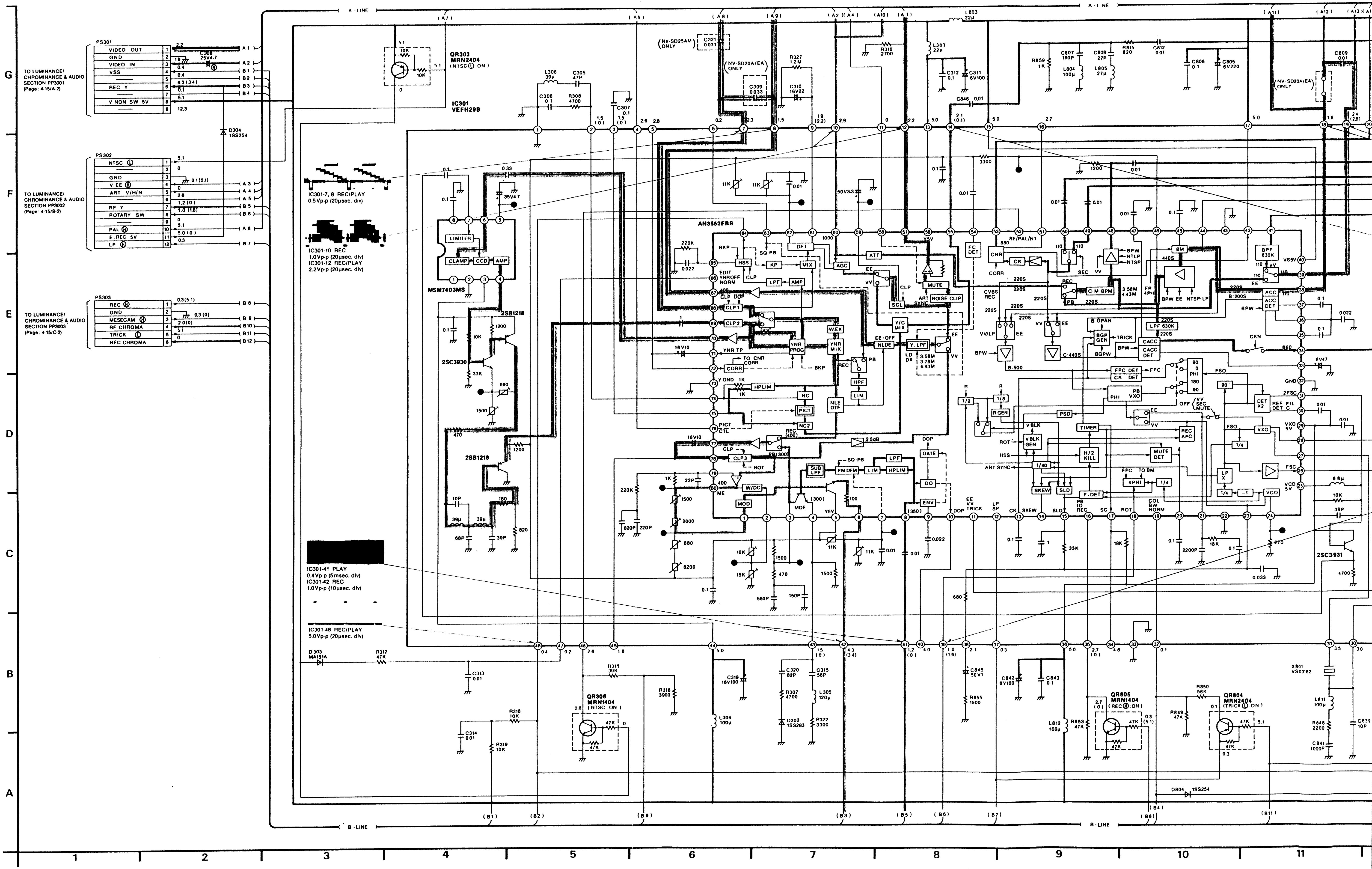
SUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE
. COLOUR SIGNAL (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

• LINE IN SIGNAL LEVEL.... 10dB 1kHz

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

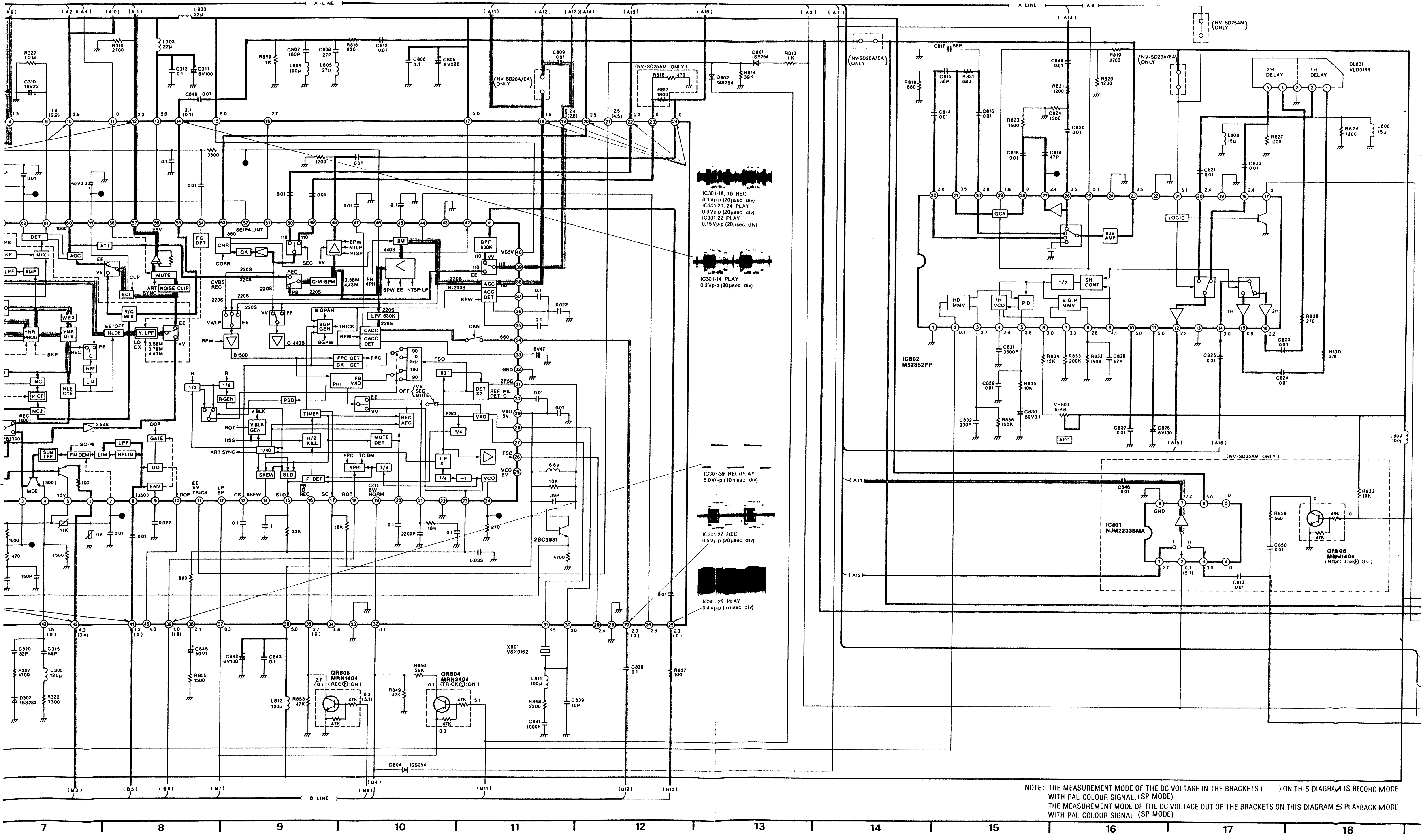
4-6. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (NV-SD20A/EA, SD25AM)


PS301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
V.NON SW 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3001 (Page: 4-15/A-2)
PS302
NTSC Ⓛ
GND
V.EE Ⓗ
ART V/H/N
RF Y
ROTARY SW
PAL Ⓗ
E.REC 5V
LP Ⓗ
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3002 (Page: 4-15/B-2)
PS303
REC Ⓗ
GND
MESECAM Ⓗ
RF CHROMA
TRICK Ⓛ
REC CHROMA
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3003 (Page: 4-15/C-2)
D304 1SS254
A LINE
B LINE
QR303 MRN2404 (NTSC Ⓛ ON)
IC301 VEFH29B
IC301-7, 8 REC/PLAY 0.5Vp-p (20μsec. div)
IC301-10 REC 1.0Vp-p (20μsec. div)
IC301-12 REC/PLAY 2.2Vp-p (20μsec. div)
IC301-41 PLAY 0.4Vp-p (5msec. div)
IC301-42 REC 1.0Vp-p (10μsec. div)
IC301-48 REC/PLAY 5.0Vp-p (20μsec. div)
MSM7403MS
LIMITER
CLAMP
CCD
AMP
2SB1218
2SC3930
AN3552FBS
D303 MA151A
QR306 MRN1404 (NTSC: ON)
QR805 MRN1404 (REC Ⓗ ON)
QR804 MRN2404 (TRICK Ⓛ ON)
2SC3931
X801 VSX0162
D302 1SS283
D804 1SS254
(NV-SD25AM) ONLY
(NV-SD20A/EA) ONLY
HSS
KP
MIX
DET
AGC
ATT
MUTE
NOISE CLIP
SCL
Y/C MIX
NLDE
Y LPF
YNR PROG
YNR MIX
W/EX
NLE DTE
HPF
LIM
HPLIM
NC
PICT
NC2
CLP1
CLP2
CLP3
CORR
MOD
W/DC
SUB LPF
FM DEM
GATE
DO
ENV
FC DET
CNR
CK
C·M·BPM
BM
BPF 630K
ACC
ACC DET
LPF 630K
CACC
CACC DET
BGP GEN
FPC DET
CK DET
PHI
VXO
DET X2
REF FIL DET C
VXO
1/4
LP X
VCO
TIMER
H/2 KILL
MUTE DET
REC AFC
V BLK GEN
1/40
SKEW
SLD
F.DET
4PHI
RGEN
PSD
1/2
1/8
2.5dB

SD25AM)

MAIN SIGNAL PATH IN REC MODE

MAIN SIGNAL PATH IN PLAYBACK MODE


A · LINE
B · LINE
IC301 18, 19 REC 0.1Vp-p (20μsec. div)
IC301 20, 24 PLAY 0.9Vp-p (20μsec. div)
IC301 22 PLAY 0.15Vp-p (20μsec. div)
IC301-14 PLAY 0.2Vp-p (20μsec. div)
IC301-39 REC/PLAY 5.0Vp-p (10msec. div)
IC301-27 REC 0.5Vp-p (20μsec. div)
IC301-25 PLAY 0.4Vp-p (5msec. div)
IC802 M52352FP
IC801 NJM2233BMA
DL801 VLD0198
2H DELAY
1H DELAY
QR805 MRN1404 (REC Ⓗ ON)
QR804 MRN2404 (TRICK Ⓛ ON)
QR806 MRN1404 (NTSC 3.58 Ⓗ ON)
2SC3931
X801 VSX0162
(NV-SD25AM ONLY)
(NV-SD20A/EA) ONLY
7
8
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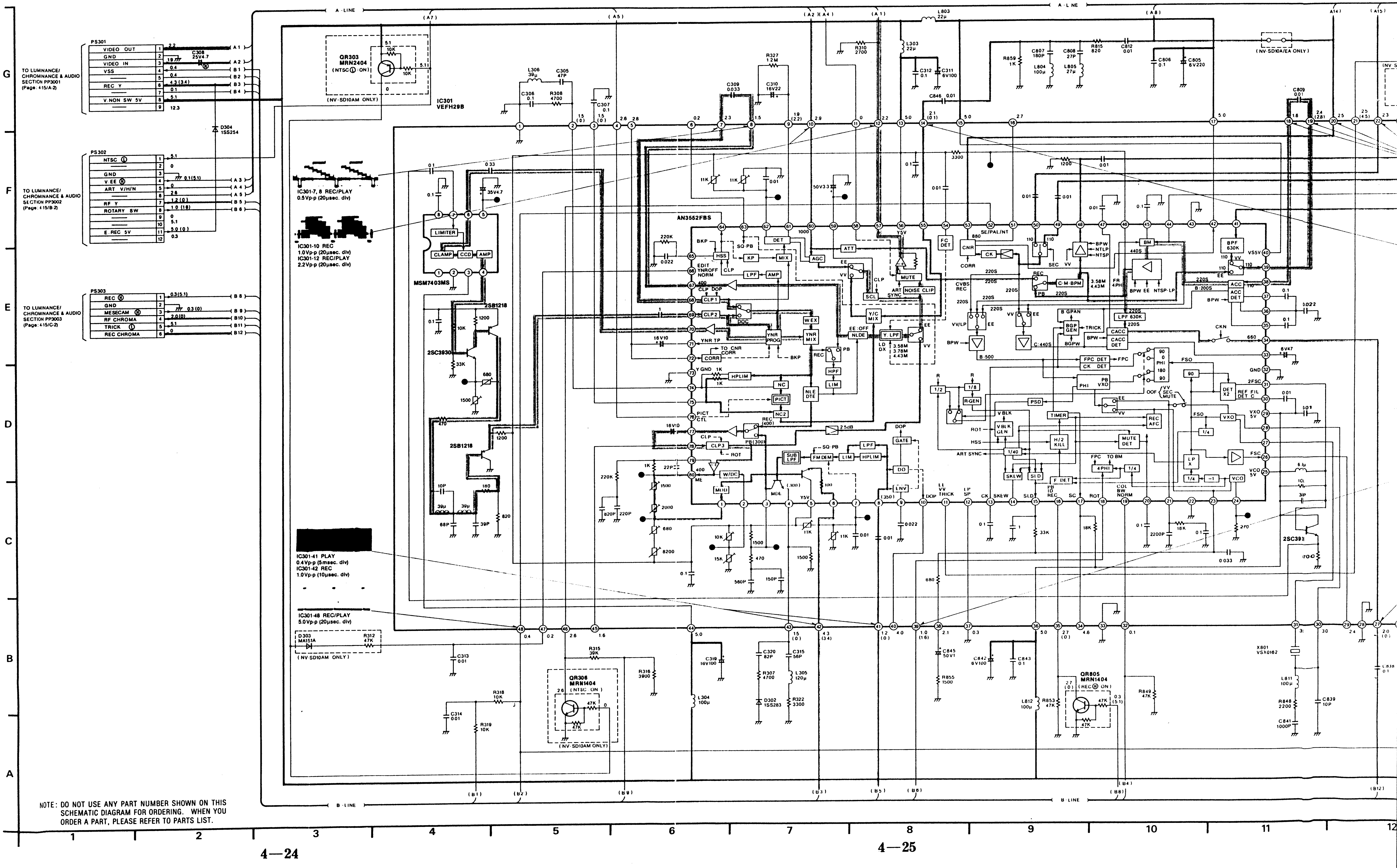
NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL (SP MODE)

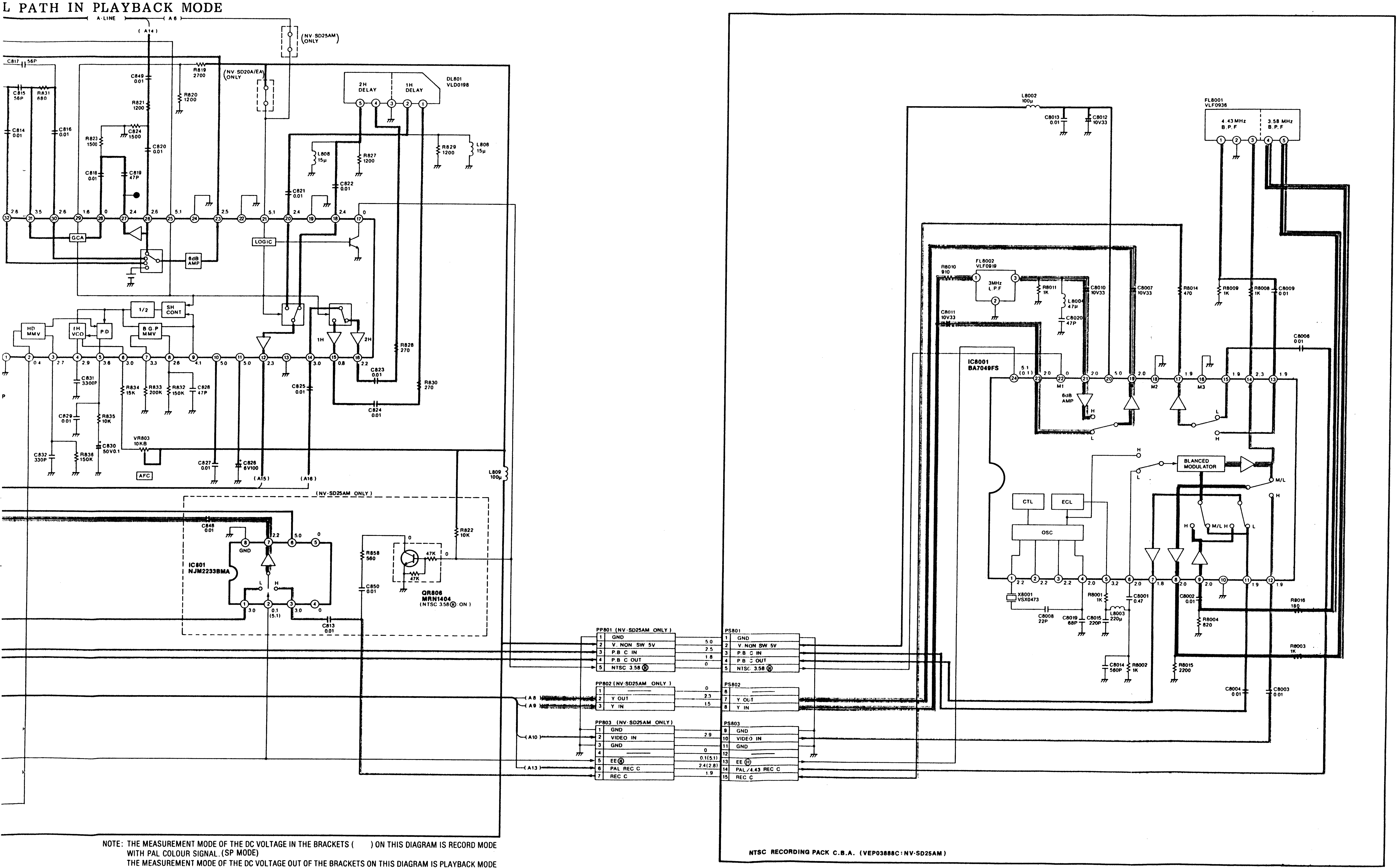
4-7. LUMINANCE & CHROMINANCE PACK SCHEMATIC DIAGRAM (NV-SD10A/EA/AM)

——— MAIN SIGNAL PATH IN REC MODE


A-LINE
B-LINE
PS301
VIDEO OUT
GND
VIDEO IN
VSS
REC Y
V.NON SW 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3001 (Page: 415/A-2)
PS302
NTSC Ⓛ
GND
V.EE Ⓗ
ART V/H/N
RF Y
ROTARY SW
E.REC 5V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3002 (Page: 415/B-2)
PS303
REC Ⓗ
GND
MESECAM Ⓗ
RF CHROMA
TRICK Ⓛ
REC CHROMA
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3003 (Page: 415/C-2)
D304 1SS254
QR303 MRN2404 (NTSC Ⓛ ON)
(NV-SD10AM ONLY)
IC301 VEFH29B
IC301-7, 8 REC/PLAY 0.5Vp-p (20µsec. div)
IC301-10 REC 1.0Vp-p (20µsec. div)
IC301-12 REC/PLAY 2.2Vp-p (20µsec. div)
IC301-41 PLAY 0.4Vp-p (5msec. div)
IC301-42 REC 1.0Vp-p (10µsec. div)
IC301-48 REC/PLAY 5.0Vp-p (20µsec. div)
MSM7403MS
LIMITER
CLAMP
CCD
AMP
2SB1218
2SC3930
AN3552FBS
D303 MA151A
R312 47K
QR306 MRN1404 (NTSC ON)
(NV-SD10AM ONLY)
QR805 MRN1404 (REC Ⓗ ON)
2SC393
X801 VSX0162
(NV-SD10A/EA ONLY)
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

L PATH IN PLAYBACK MODE

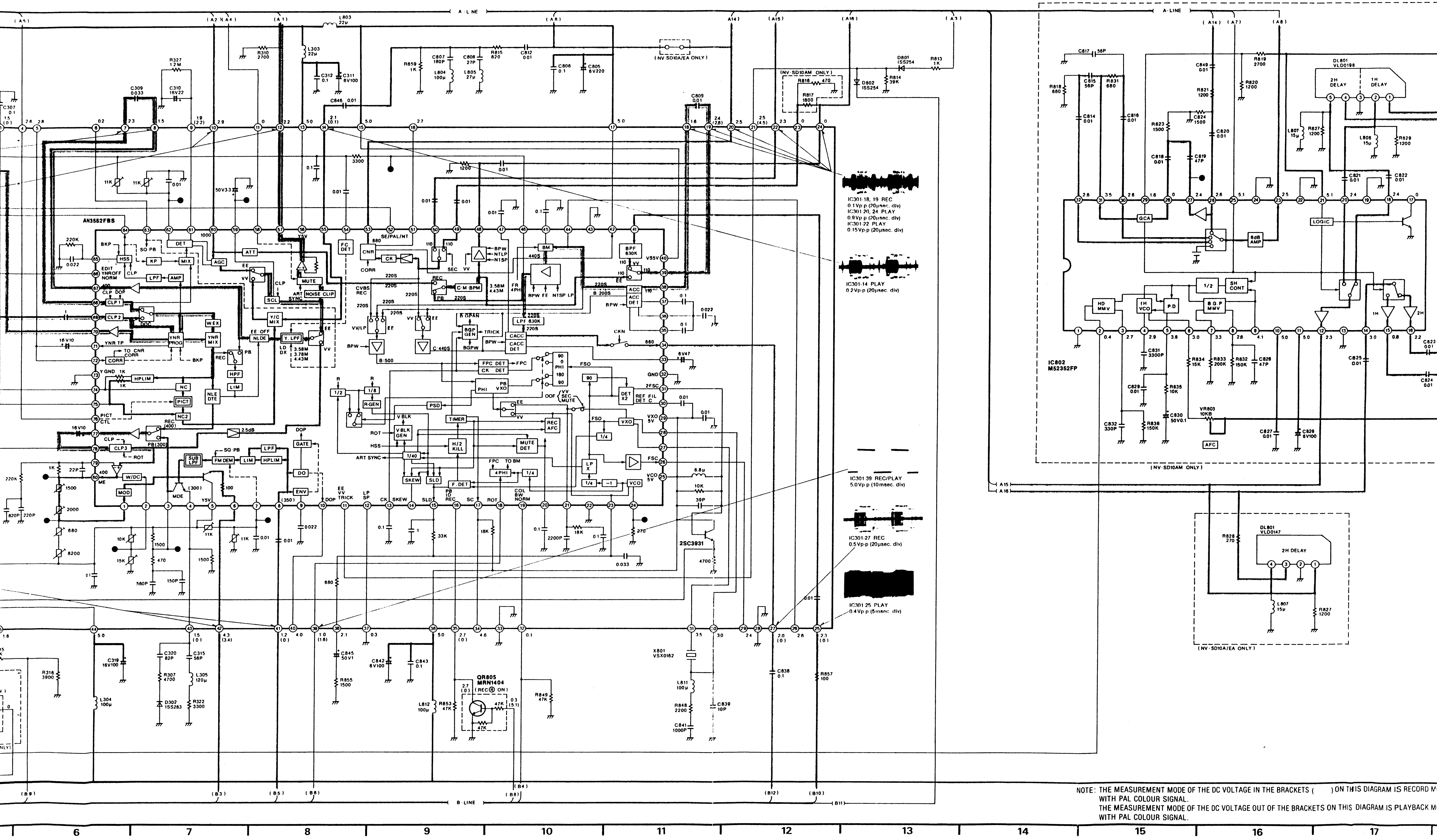

A-LINE
A 6
A14
NV-SD25AM ONLY
NV-SD20A/EA ONLY
C817 56P
C815 56P
R831 680
C814 0.01
C816 0.01
C849 0.01
R819 2700
R820 1200
R821 1200
R823 1500
C824 1500
C820 0.01
C818 0.01
C819 47P
2H DELAY
1H DELAY
DL801 VLD0198
L808 15μ
R827 1200
R829 1200
C821 0.01
C822 0.01
GCA
LOGIC
8dB AMP
1/2
SH CONT
HD MMV
1H VCO
P.D
B.G.P MMV
R828 270
C823 0.01
R830 270
C824 0.01
C825 0.01
C831 3300P
R834 15K
R833 200K
R832 150K
C828 47P
C829 0.01
R835 10K
C830 50V0.1
VR803 10KB
C832 330P
R836 150K
AFC
C827 0.01
C826 6V100
A15
A16
L809 100μ
NV-SD25AM ONLY
C848 0.01
IC801 NJM2233BMA
GND
R822 10K
R858 560
C850 0.01
47K
QR806 MRN1404
(NTSC 3.58 Ⓗ ON)
C813 0.01
A8
A9
A10
A13
PP801 (NV-SD25AM ONLY)
1 GND
2 V. NON SW 5V
3 P.B C IN
4 P.B C OUT
5 NTSC 3.58 Ⓗ
PP802 (NV-SD25AM ONLY)
1 ———
2 Y OUT
3 Y IN
PP803 (NV-SD25AM ONLY)
1 GND
2 VIDEO IN
3 GND
4 ———
5 EE Ⓗ
6 PAL REC C
7 REC C
5.0
2.5
1.8
0
0
2.3
1.5
2.9
0
0.1(5.1)
2.4(2.8)
1.9
PS801
1 GND
2 V. NON SW 5V
3 P.B C IN
4 P.B C OUT
5 NTSC 3.58 Ⓗ
PS802
6 ———
7 Y OUT
8 Y IN
PS803
9 GND
10 VIDEO IN
11 GND
12 ———
13 EE Ⓗ
14 PAL/4.43 REC C
15 REC C
L8002 100μ
C8013 0.01
C8012 10V33
FL8001 VLF0936
4.43 MHz B.P.F
3.58 MHz B.P.F
R8010 910
FL8002 VLF0919
3MHz L.P.F
R8011 1K
L8004 47μ
C8010 10V33
C8020 47P
C8007 10V33
R8014 470
R8009 1K
R8008 1K
C8009 0.01
C8011 10V33
C8006 0.01
IC8001 BA7049FS
M1
8dB AMP
M2
M3
BLANCED MODULATOR
M/L
CTL
ECL
OSC
X8001 VSX0473
C8008 22P
C8019 68P
C8015 220P
R8001 1K
L8003 220μ
C8001 0.47
C8002 0.01
R8004 820
R8016 180
R8003 1K
C8014 560P
R8002 1K
R8015 2200
C8004 0.01
C8003 0.01
NTSC RECORDING PACK C.B.A. (VEP03888C: NV-SD25AM)
15
16
17
18
19
20
21
22
23
24
25

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS (   ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

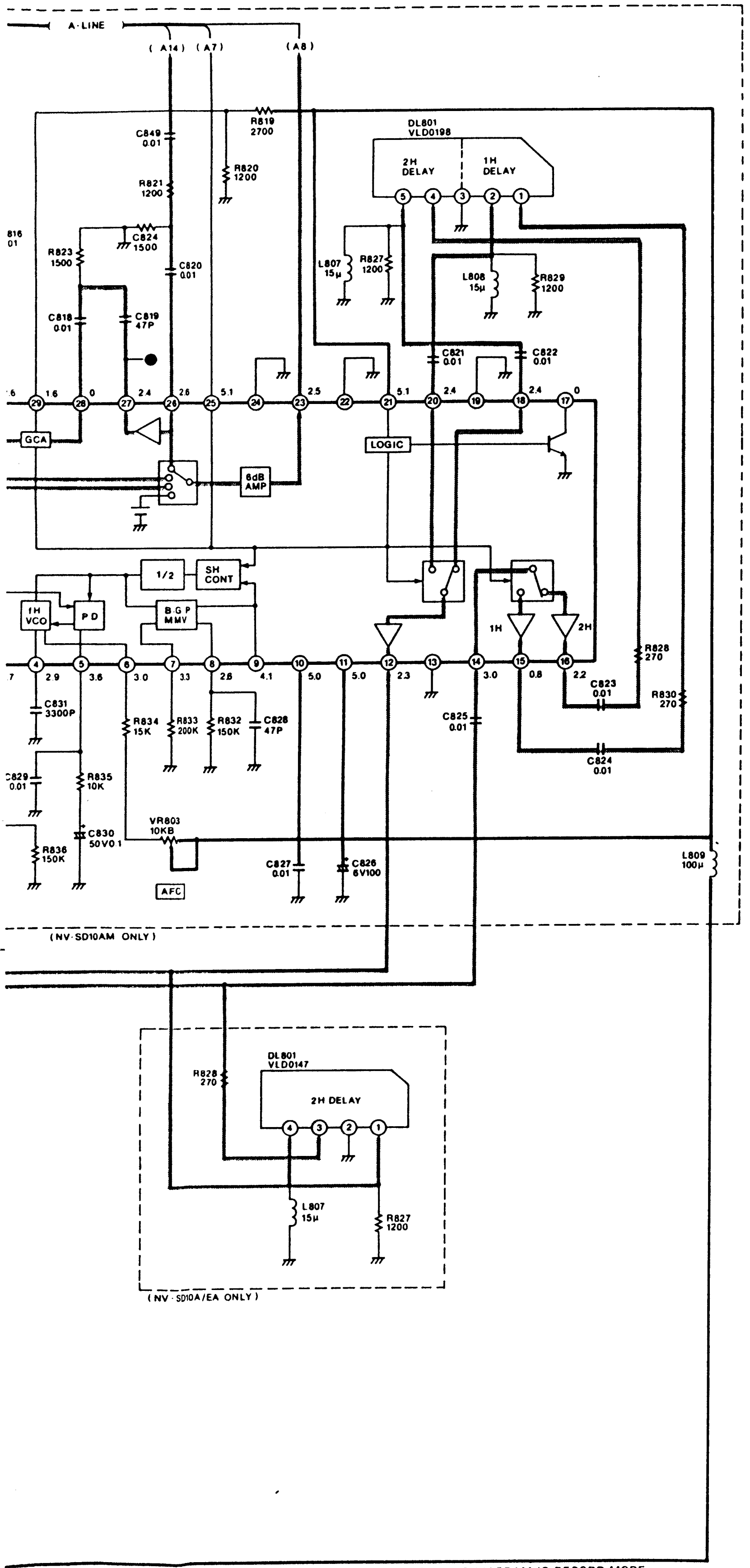
M (NV-SD10A/EA/AM)

MAIN SIGNAL PATH IN REC MODE —— MAIN SIGNAL PATH IN PLAYBACK MODE


A-LINE
B-LINE
AN3552FBS
IC802
M52352FP
L803 22μ
L303 22μ
R310 2700
R327 1.2M
C309 0.033
C310 16V22
C312 0.1
C311 6V100
C846 0.01
R859 1K
C807 180P
L804 100μ
C808 27P
L805 27μ
R815 820
C812 0.01
C806 0.1
C805 6V220
(NV-SD10A/EA ONLY)
(NV-SD10AM ONLY)
R816 470
R817 1800
D801 1SS254
D802 1SS254
R813 1K
R814 39K
C809 0.01
IC301-18, 19 REC 0.1Vp-p (20μsec. div)
IC301-20, 24 PLAY 0.9Vp-p (20μsec. div)
IC301-22 PLAY 0.15Vp-p (20μsec. div)
IC301-14 PLAY 0.2Vp-p (20μsec. div)
IC301-39 REC/PLAY 5.0Vp-p (10msec. div)
IC301-27 REC 0.5Vp-p (20μsec. div)
IC301-25 PLAY 0.4Vp-p (5msec. div)
BKP
HSS
SQ PB
DET
KP
MIX
LPF
AMP
AGC
ATT
CLP 1
CLP 2
CLP 3
YNR PROG
W.EX
YNR MIX
NLE DTE
NLDE
Y/C MIX
Y.LPF
MUTE
NOISE CLIP
SCL
FC DET
CNR
CK
C·M·BPM
BPF 630K
ACC
ACC DET
LPF 630K
CACC
CACC DET
BGP GEN
FPC DET
CK DET
PH1
PB VXO
PSD
TIMER
V BLK GEN
H/2 KILL
MUTE DET
REC AFC
1/2
1/8
RGEN
1/40
SKEW
SLD
F. DET
4PH1
1/4
-1
VCO
VXO
LP X
DET X2
REF FIL DET C
90
FSO
GATE
DO
ENV
HPLIM
LIM
FM DEM
SUB LPF
W/DC
MOD
HPLIM
NC
PICT
NC2
HPF
2SC3931
X801 VSX0182
L811 100μ
R848 2200
C839 10P
C841 1000P
QR805 MRN1404 (REC ON)
L812 100μ
R853 47K
R849 47K
C845 50V1
R855 1500
C842 6V100
C843 0.1
C838 0.1
R857 100
C319 16V100
R316 3900
L304 100μ
C320 82P
R307 4700
D302 1SS283
C315 56P
L305 120μ
R322 3300
C817 56P
R818 680
C815 56P
R831 680
C814 0.01
C816 0.01
C849 0.01
R819 2700
R820 1200
R821 1200
R823 1500
C824 1500
C820 0.01
C818 0.01
C819 47P
DL801 VLD0198
2H DELAY
1H DELAY
L807 15μ
R827 1200
L808 15μ
R829 1200
C821 0.01
C822 0.01
GCA
6dB AMP
LOGIC
1/2
SH CONT
HD MMV
1H VCO
PD
B.G.P MMV
C831 3300P
R834 15K
R833 200K
R832 150K
C828 47P
C829 0.01
R835 10K
C832 330P
R836 150K
C830 50V0.1
VR803 10KB
AFC
C827 0.01
C826 6V100
C825 0.01
(NV-SD10AM ONLY)
DL801 VLD0147
R828 270
(NV-SD10A/EA ONLY)
6
7
8
9
10
11
12
13
14
15
16
17

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD M
WITH PAL COLOUR SIGNAL.
THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK M
WITH PAL COLOUR SIGNAL.

ƆK MODE

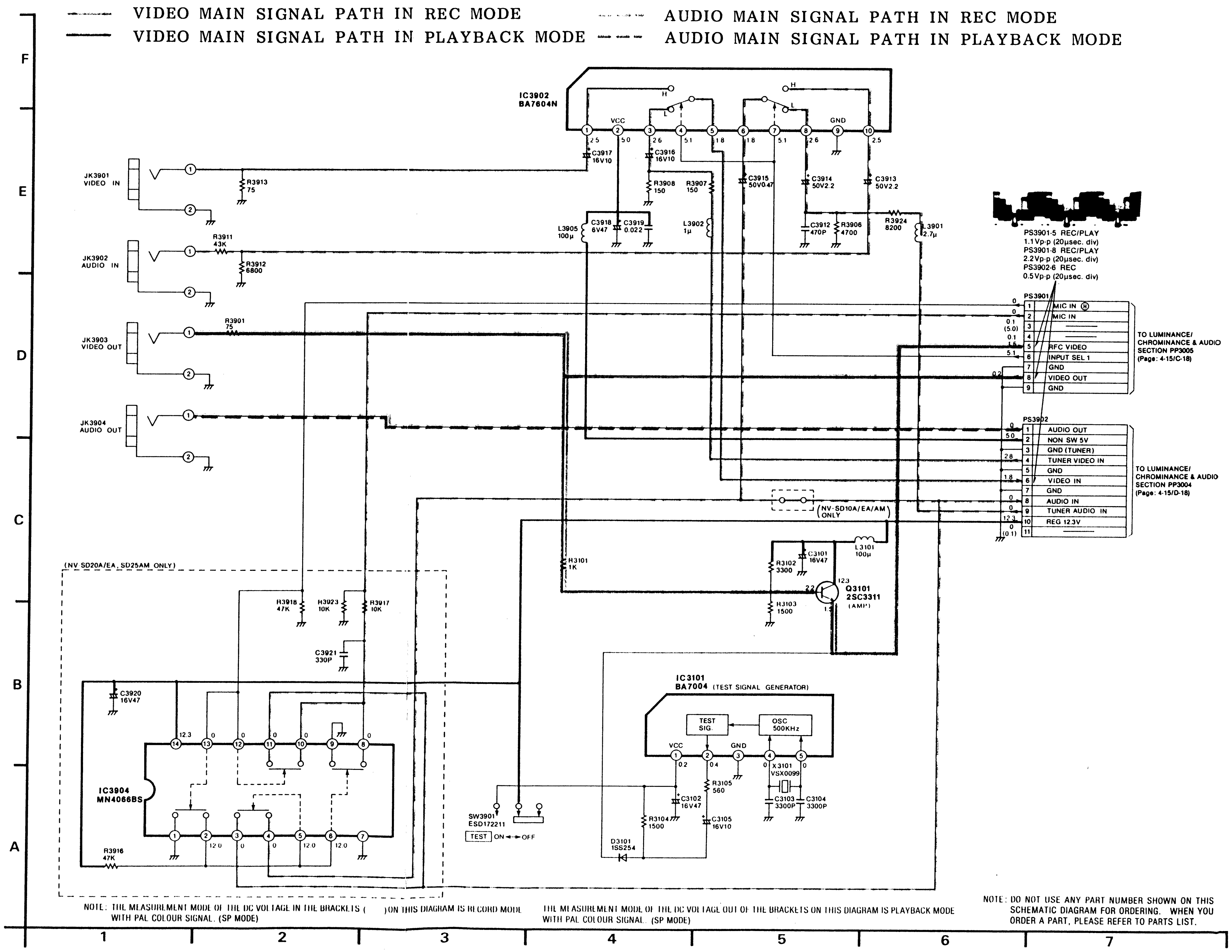


A-LINE
(A14)
(A7)
(A8)
C849 0.01
R819 2700
R820 1200
R821 1200
DL801 VLD0198
2H DELAY
1H DELAY
C824 1500
C820 0.01
R823 1500
L807 15µ
R827 1200
L808 15µ
R829 1200
C818 0.01
C819 47P
C821 0.01
C822 0.01
GCA
6dB AMP
LOGIC
1/2
SH CONT
1H VCO
PD
BGP MMV
R828 270
R830 270
C823 0.01
C831 3300P
R834 15K
R833 200K
R832 150K
C828 47P
C825 0.01
C824 0.01
C829 0.01
R835 10K
R836 150K
C830 50V0.1
VR803 10KB
AFC
C827 0.01
C826 6V100
L809 100µ
(NV-SD10AM ONLY)
DL801 VLD0147
2H DELAY
R828 270
L807 15µ
R827 1200
(NV-SD10A/EA ONLY)
15
16
17
18

…SUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE …L COLOUR SIGNAL.

…SUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE …L COLOUR SIGNAL.

4-8. INPUT/OUTPUT PACK SCHEMATIC DIAGRAM



----- VIDEO MAIN SIGNAL PATH IN REC MODE

—— VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

- - - AUDIO MAIN SIGNAL PATH IN REC MODE

– – – AUDIO MAIN SIGNAL PATH IN PLAYBACK MODE

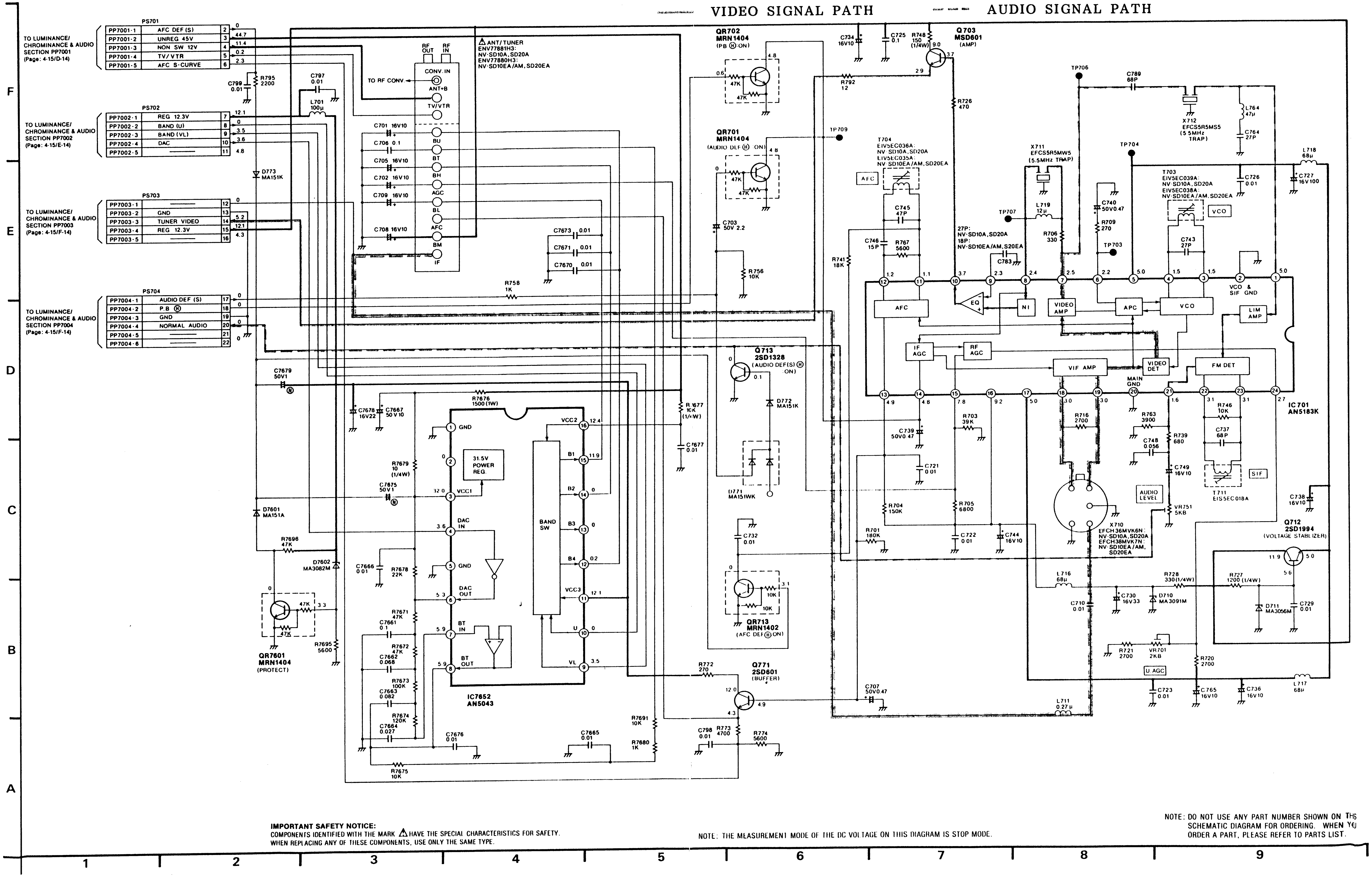
F
E
D
C
B
A
IC3902 BA7604N
VCC
GND
H
L
C3917 16V10
C3916 16V10
C3915 50V0.47
C3914 50V2.2
C3913 50V2.2
JK3901 VIDEO IN
R3913 75
R3908 150
R3907 150
C3918 6V47
C3919 0.022
L3905 100µ
L3902 1µ
C3912 470P
R3906 4700
R3924 8200
L3901 2.7µ
JK3902 AUDIO IN
R3911 43K
R3912 6800
JK3903 VIDEO OUT
R3901 75
JK3904 AUDIO OUT
PS3901-5 REC/PLAY 1.1Vp-p (20µsec. div)
PS3901-8 REC/PLAY 2.2Vp-p (20µsec. div)
PS3902-6 REC 0.5Vp-p (20µsec. div)
PS3901
MIC IN Ⓗ
MIC IN
RFC VIDEO
INPUT SEL 1
GND
VIDEO OUT
GND
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3005 (Page: 4-15/C-18)
PS3902
AUDIO OUT
NON SW 5V
GND (TUNER)
TUNER VIDEO IN
GND
VIDEO IN
GND
AUDIO IN
TUNER AUDIO IN
REG 12.3V
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP3004 (Page: 4-15/D-18)
(NV-SD10A/EA/AM ONLY)
R3101 1K
R3102 3300
C3101 16V47
L3101 100µ
Q3101 2SC3311 (AMP)
R3103 1500
(NV-SD20A/EA, SD25AM ONLY)
R3918 47K
R3923 10K
R3917 10K
C3921 330P
C3920 16V47
IC3904 MN4066BS
R3916 47K
IC3101 BA7004 (TEST SIGNAL GENERATOR)
TEST SIG.
OSC 500KHz
VCC
GND
X3101 VSX0099
R3105 560
C3102 16V47
C3103 3300P
C3104 3300P
R3104 1500
C3105 16V10
D3101 1SS254
SW3901 ESD172211
TEST ON ←→ OFF
1
2
3
4
5
6
7

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-10. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-SD10A/EA/AM, SD20A/EA)


VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
PS701
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7001 (Page: 4-15/D-14)
PP7001-1 AFC DEF (S) 2
PP7001-2 UNREG 45V 3
PP7001-3 NON SW 12V 4
PP7001-4 TV/VTR 5
PP7001-5 AFC S-CURVE 6
PS702
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7002 (Page: 4-15/E-14)
PP7002-1 REG 12.3V 7
PP7002-2 BAND (U) 8
PP7002-3 BAND (VL) 9
PP7002-4 DAC 10
PP7002-5 11
PS703
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7003 (Page: 4-15/F-14)
PP7003-1 12
PP7003-2 GND 13
PP7003-3 TUNER VIDEO 14
PP7003-4 REG 12.3V 15
PP7003-5 16
PS704
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7004 (Page: 4-15/F-14)
PP7004-1 AUDIO DEF (S) 17
PP7004-2 P.B Ⓗ 18
PP7004-3 GND 19
PP7004-4 NORMAL AUDIO 20
PP7004-5 21
PP7004-6 22
⚠ ANT/TUNER ENV77881H3: NV-SD10A, SD20A ENV77880H3: NV-SD10EA/AM, SD20EA
RF OUT
RF IN
CONV. IN
ANT+B
TV/VTR
BU
BT
BH
AGC
BL
AFC
BM
IF
TO RF CONV.
C799 0.01
R795 2200
C797 0.01
L701 100μ
C701 16V10
C706 0.1
C705 16V10
C702 16V10
C709 16V10
C708 16V10
D773 MA151K
C7673 0.01
C7671 0.01
C7670 0.01
R758 1K
C7679 50V1
C7678 16V22
C7667 50V10
R7676 1500 (1W)
R7679 10 (1/4W)
C7675 50V1
31.5V POWER REG.
GND
VCC1
DAC IN
DAC OUT
BT IN
BT OUT
BAND SW
VCC2
VCC3
B1
B2
B3
B4
U
VL
IC7652 AN5043
D7601 MA151A
R7696 47K
D7602 MA3082M
C7666 0.01
R7678 22K
R7671 47K
C7661 0.1
R7672 47K
C7662 0.068
R7673 100K
C7663 0.082
R7674 120K
C7664 0.027
C7676 0.01
C7665 0.01
R7675 10K
R7691 10K
R7680 1K
QR7601 MRN1404 (PROTECT)
R7695 5600
R7677 10K (1/4W)
C7677 0.01
QR702 MRN1404 (PB Ⓗ ON)
QR701 MRN1404 (AUDIO DEF Ⓗ ON)
C703 50V 2.2
R756 10K
Q713 2SD1328 (AUDIO DEF(S) Ⓗ ON)
D772 MA151K
D771 MA151WK
C732 0.01
QR713 MRN1402 (AFC DEF Ⓗ ON)
R772 270
Q771 2SD601 (BUFFER)
C798 0.01
R773 4700
R774 5600
C707 50V0.47
C734 16V10
C725 0.1
R748 150 (1/4W)
Q703 MSD601 (AMP)
R792 12
R726 470
TP709
T704 EIV5EC036A: NV-SD10A, SD20A EIV5EC035A: NV-SD10EA/AM, SD20EA
AFC
C745 47P
C746 15P
R767 5600
R741 18K
27P: NV-SD10A, SD20A 18P: NV-SD10EA/AM, S20EA
C783
X711 EFCS5R5MW5 (5.5MHz TRAP)
TP707
L719 12μ
R706 330
TP706
C789 68P
X712 EFCS5R5MS5 (5.5MHz TRAP)
L764 47μ
C764 27P
TP704
C740 50V0.47
R709 270
TP703
T703 EIV5EC039A: NV-SD10A, SD20A EIV5EC038A: NV-SD10EA/AM, SD20EA
VCO
C743 27P
C726 0.01
L718 68μ
C727 16V100
AFC
EQ
NI
VIDEO AMP
APC
VCO
VCO & SIF GND
LIM AMP
IF AGC
RF AGC
VIF AMP
VIDEO DET
FM DET
MAIN GND
IC701 AN5183K
C739 50V0.47
C721 0.01
R763 39K
R716 2700
R763 3900
C748 0.056
R739 680
C749 16V10
R746 10K
C737 68P
SIF
T711 EIS5EC018A
AUDIO LEVEL
VR751 5KB
X710 EFCH36MVK6N: NV-SD10A, SD20A EFCH38MVK7N: NV-SD10EA/AM, SD20EA
R704 150K
R705 6800
R701 180K
C722 0.01
C744 16V10
C738 16V10
Q712 2SD1994 (VOLTAGE STABILIZER)
L716 68μ
C710 0.01
C730 16V33
D710 MA3091M
R728 330 (1/4W)
R727 1200 (1/4W)
D711 MA3056M
C729 0.01
R721 2700
VR701 2KB
U AGC
R720 2700
C723 0.01
C765 16V10
C736 16V10
L717 68μ
L711 0.27μ
A
B
C
D
E
F
1
2
3
4
5
6
7
8
9

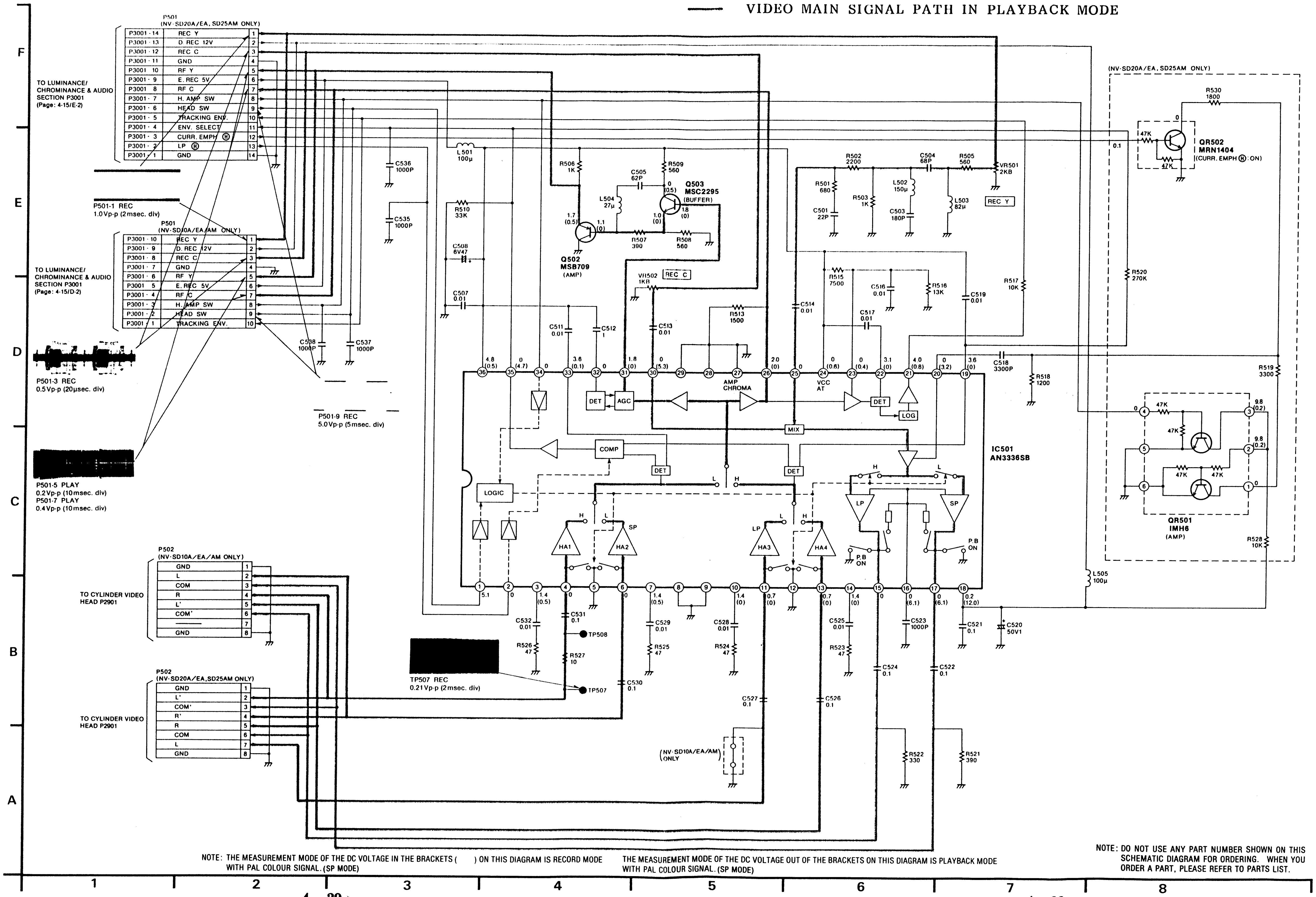
IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

4-9. HEAD AMP SCHEMATIC DIAGRAM

VIDEO MAIN SIGNAL PATH IN REC MODE
VIDEO MAIN SIGNAL PATH IN PLAYBACK MODE

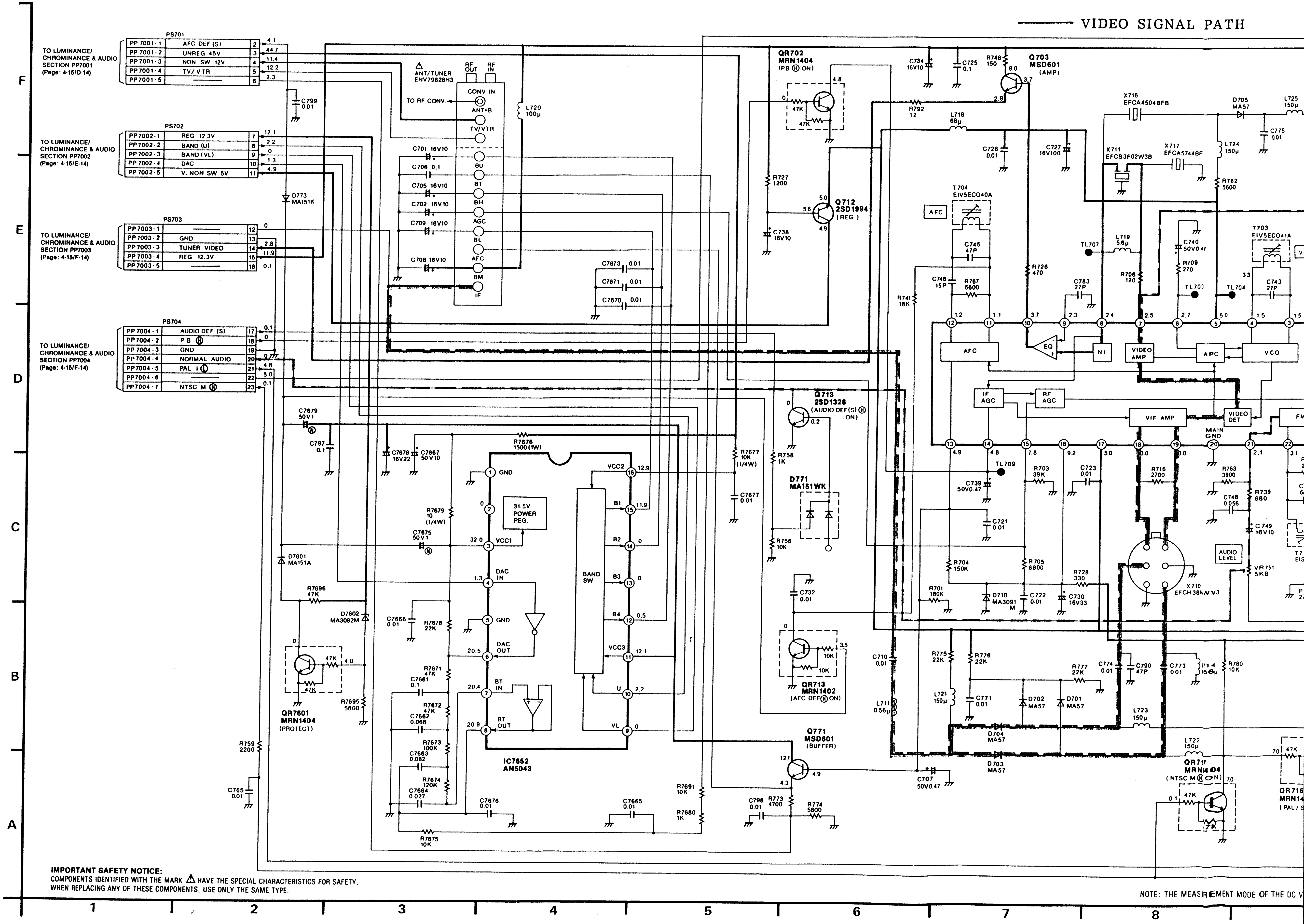

P501 (NV-SD20A/EA, SD25AM ONLY)
P3001-14 REC Y
P3001-13 D REC 12V
P3001-12 REC C
P3001-11 GND
P3001-10 RF Y
P3001-9 E. REC 5V
P3001-8 RF C
P3001-7 H. AMP SW
P3001-6 HEAD SW
P3001-5 TRACKING ENV.
P3001-4 ENV. SELECT
P3001-3 CURR. EMPH Ⓗ
P3001-2 LP Ⓗ
P3001-1 GND
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-15/E-2)
P501 (NV-SD10A/EA/AM ONLY)
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION P3001 (Page: 4-15/D-2)
P501-1 REC 1.0Vp-p (2msec. div)
P501-3 REC 0.5Vp-p (20μsec. div)
P501-5 PLAY 0.2Vp-p (10msec. div)
P501-7 PLAY 0.4Vp-p (10msec. div)
P501-9 REC 5.0Vp-p (5msec. div)
P502 (NV-SD10A/EA/AM ONLY)
P502 (NV-SD20A/EA,SD25AM ONLY)
TO CYLINDER VIDEO HEAD P2901
GND
L
COM
R
L'
COM'
R'
TP507 REC 0.21Vp-p (2msec. div)
TP507
TP508
C536 1000P
C535 1000P
C538 1000P
C537 1000P
L501 100μ
R510 33K
C508 6V47
C507 0.01
R506 1K
R509 560
C505 62P
L504 27μ
Q503 MSC2295 (BUFFER)
Q502 MSB709 (AMP)
R507 390
R508 560
VR502 1KB
REC C
R513 1500
C511 0.01
C512 1
C513 0.01
C514 0.01
R502 2200
C504 68P
R505 560
VR501 2KB
R501 680
R503 1K
L502 150μ
L503 82μ
C501 22P
C503 180P
REC Y
R515 7500
C516 0.01
R516 13K
C517 0.01
C519 0.01
R517 10K
C518 3300P
R518 1200
AMP CHROMA
VCC AT
DET
AGC
MIX
COMP
LOGIC
LOG
LP
SP
HA1
HA2
HA3
HA4
H
L
P.B ON
IC501 AN3336SB
(NV-SD20A/EA, SD25AM ONLY)
R530 1800
QR502 MRN1404 (CURR. EMPH Ⓗ: ON)
47K
R520 270K
R519 3300
QR501 IMH6 (AMP)
R528 10K
L505 100μ
C532 0.01
R526 47
C531 0.1
R527 10
C530 0.1
C529 0.01
R525 47
C528 0.01
R524 47
C527 0.1
C526 0.1
C525 0.01
R523 47
C524 0.1
C523 1000P
C522 0.1
C521 0.1
C520 50V1
R522 330
R521 390
(NV-SD10A/EA/AM) ONLY
A
B
C
D
E
F
1
2
3
4
5
6
7
8

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE IN THE BRACKETS ( ) ON THIS DIAGRAM IS RECORD MODE WITH PAL COLOUR SIGNAL. (SP MODE)

THE MEASUREMENT MODE OF THE DC VOLTAGE OUT OF THE BRACKETS ON THIS DIAGRAM IS PLAYBACK MODE WITH PAL COLOUR SIGNAL. (SP MODE)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

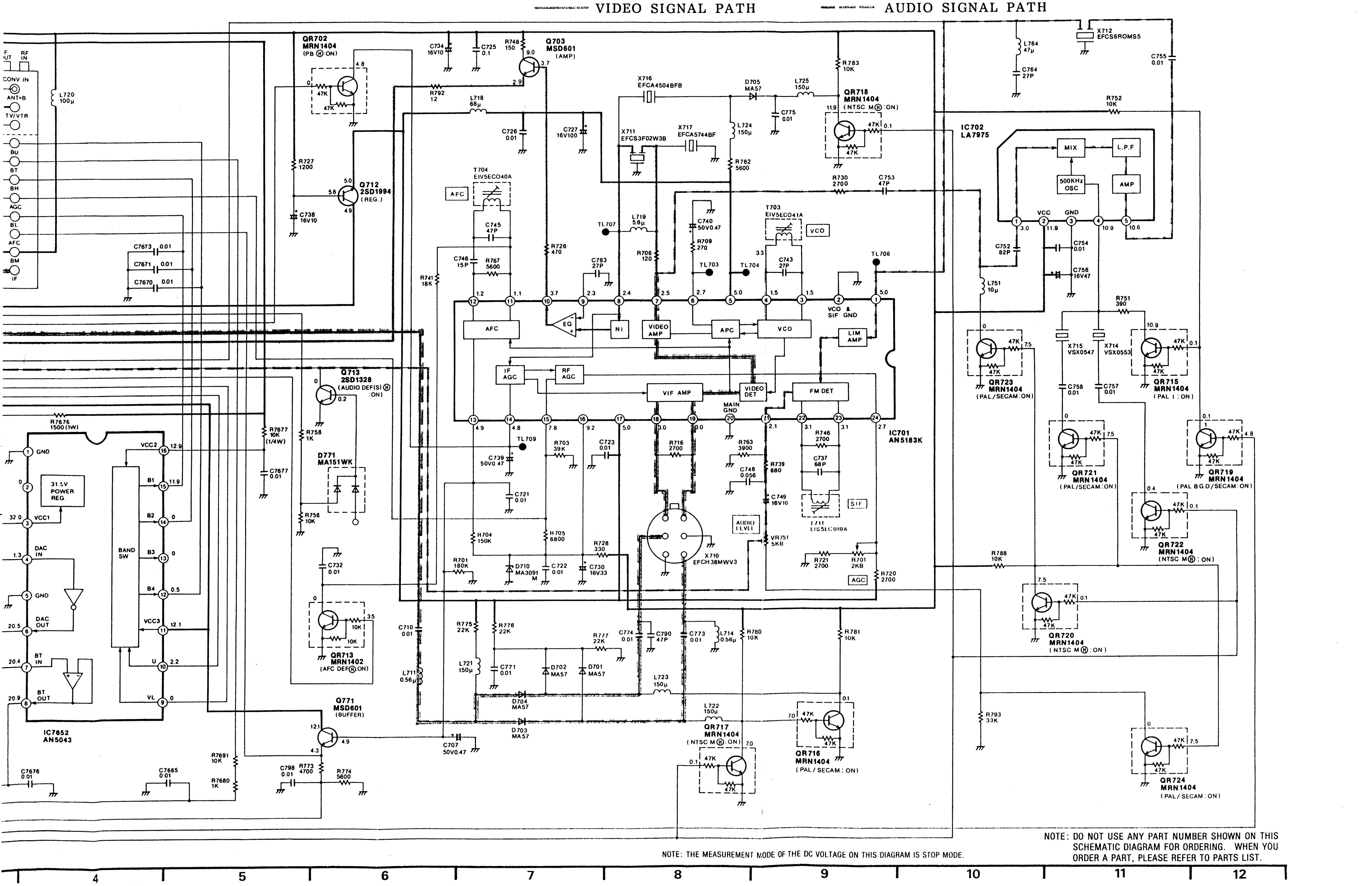
4-11. TV DEMODULATOR PACK SCHEMATIC DIAGRAM (NV-SD25AM)


VIDEO SIGNAL PATH
F
E
D
C
B
A
1
2
3
4
5
6
7
8
PS701
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7001 (Page: 4-15/D-14)
PP 7001-1 AFC DEF (S) 2
PP 7001-2 UNREG 45V 3
PP 7001-3 NON SW 12V 4
PP 7001-4 TV/VTR 5
PP 7001-5 6
PS702
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7002 (Page: 4-15/E-14)
PP 7002-1 REG 12.3V 7
PP 7002-2 BAND (U) 8
PP 7002-3 BAND (VL) 9
PP 7002-4 DAC 10
PP 7002-5 V. NON SW 5V 11
PS703
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7003 (Page: 4-15/F-14)
PP 7003-1 12
PP 7003-2 GND 13
PP 7003-3 TUNER VIDEO 14
PP 7003-4 REG 12.3V 15
PP 7003-5 16
PS704
TO LUMINANCE/ CHROMINANCE & AUDIO SECTION PP7004 (Page: 4-15/F-14)
PP 7004-1 AUDIO DEF (S) 17
PP 7004-2 P.B Ⓗ 18
PP 7004-3 GND 19
PP 7004-4 NORMAL AUDIO 20
PP 7004-5 PAL I Ⓛ 21
PP 7004-6 22
PP 7004-7 NTSC M Ⓗ 23
ANT/TUNER ENV79828H3
RF OUT
RF IN
TO RF CONV.
CONV. IN
ANT+B
TV/VTR
BU
BT
BH
AGC
BL
AFC
BM
IF
L720 100μ
C799 0.01
D773 MA151K
C701 16V10
C706 0.1
C705 16V10
C702 16V10
C709 16V10
C708 16V10
C7673 0.01
C7671 0.01
C7670 0.01
QR702 MRN1404 (PB Ⓗ ON)
Q712 2SD1994 (REG.)
R727 1200
C738 16V10
Q713 2SD1328 (AUDIO DEF(S) Ⓗ :ON)
D771 MA151WK
R758 1K
R756 10K
C732 0.01
QR713 MRN1402 (AFC DEF Ⓗ ON)
Q771 MSD601 (BUFFER)
R7677 10K (1/4W)
C7677 0.01
R7691 10K
R7680 1K
C798 0.01
R773 4700
R774 5600
C7679 50V1
C797 0.1
C7678 16V22
C7667 50V10
R7676 1500 (1W)
R7679 10 (1/4W)
C7675 50V1
D7601 MA151A
R7696 47K
D7602 MA3082M
QR7601 MRN1404 (PROTECT)
R7695 5600
R759 2200
C765 0.01
C7666 0.01
R7678 22K
R7671 47K
C7661 0.1
R7672 47K
C7662 0.068
R7673 100K
C7663 0.082
R7674 120K
C7664 0.027
R7675 10K
C7676 0.01
C7665 0.01
GND
VCC1
DAC IN
DAC OUT
BT IN
BT OUT
31.5V POWER REG.
VCC2
B1
B2
B3
B4
VCC3
U
VL
BAND SW
IC7652 AN5043
C734 16V10
C725 0.1
R748 150
Q703 MSD601 (AMP)
R792 12
L718 68μ
C726 0.01
C727 16V100
X716 EFCA4504BFB
D705 MA57
L725 150μ
C775 0.01
X711 EFCS3F02W3B
X717 EFCA5744BF
L724 150μ
R782 5600
T704 EIV5ECO40A
AFC
C745 47P
C746 15P
R787 5600
R741 18K
R726 470
C783 27P
TL707
L719 5.6μ
R706 120
C740 50V0.47
R709 270
TL703
TL704
T703 EIV5ECO41A
C743 27P
AFC
EQ
NI
VIDEO AMP
APC
VCO
IF AGC
RF AGC
VIF AMP
VIDEO DET
MAIN GND
TL709
C739 50V0.47
R703 39K
C723 0.01
R716 2700
R763 3900
C748 0.056
R739 680
C749 16V10
C721 0.01
R704 150K
R705 6800
R728 330
AUDIO LEVEL
VR751 5KB
X710 EFCH38NVV3
R701 180K
D710 MA3091M
C722 0.01
C730 16V33
C710 0.01
R775 22K
R776 22K
R777 22K
C774 0.01
C790 47P
C773 0.01
L714 150μ
R780 10K
L721 150μ
C771 0.01
D702 MA57
D701 MA57
L711 0.56μ
D704 MA57
L723 150μ
D703 MA57
C707 50V0.47
L722 150μ
QR717 MRN1404 (NTSC M Ⓗ ON)
QR716 MRN14
(PAL/S

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED WITH THE MARK ⚠ HAVE THE SPECIAL CHARACTERISTICS FOR SAFETY.
WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SAME TYPE.

NOTE: THE MEASUREMENT MODE OF THE DC V

IAGRAM (NV-SD25AM)

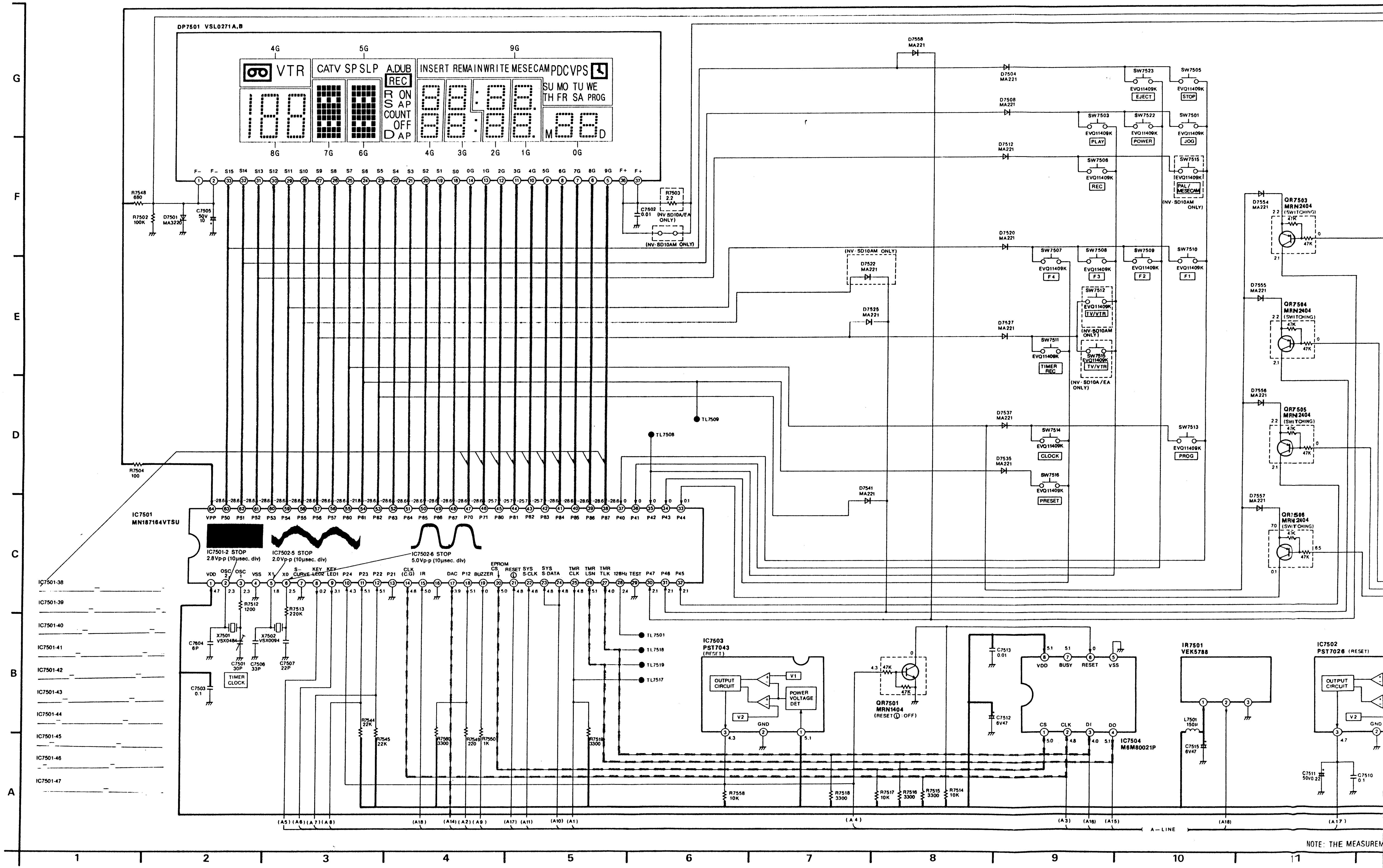

VIDEO SIGNAL PATH
AUDIO SIGNAL PATH
RF OUT
RF IN
CONV. IN
ANT+B
TV/VTR
BU
BT
BH
AGC
BL
AFC
BM
IF
L720 100μ
QR702 MRN1404 (PB Ⓗ:ON)
47K
47K
R727 1200
C738 16V10
Q712 2SD1994 (REG.)
5.0
5.6
4.9
C7673 0.01
C7671 0.01
C7670 0.01
C734 16V10
C725 0.1
R748 150
9.0
Q703 MSD601 (AMP)
3.7
2.9
R792 12
L718 68μ
C726 0.01
C727 16V100
T704 EIV5ECO40A
AFC
C745 47P
C746 15P
R767 5600
R741 18K
R726 470
C783 27P
X716 EFCA4504BFB
X711 EFCS3F02W3B
X717 EFCA5744BF
TL707
L719 5.6μ
R706 120
D705 MA57
L725 150μ
C775 0.01
L724 150μ
R782 5600
C740 50V0.47
R709 270
TL703
TL704
T703 EIV5EC041A
VCO
C743 27P
R783 10K
QR718 MRN1404 (NTSC M Ⓗ:ON)
11.9
47K
0.1
47K
R730 2700
C753 47P
TL706
1.2
1.1
3.7
2.3
2.4
2.5
2.7
5.0
1.5
1.5
5.0
AFC
EQ
NI
VIDEO AMP
APC
VCO
VCO & SIF GND
LIM AMP
IF AGC
RF AGC
VIF AMP
VIDEO DET
FM DET
MAIN GND
IC701 AN5183K
4.9
4.8
7.8
9.2
5.0
3.0
3.0
2.1
3.1
3.1
2.7
Q713 2SD1328 (AUDIO DEF(S) Ⓗ:ON)
0
0.2
R758 1K
D771 MA151WK
R756 10K
TL709
C739 50V0.47
C721 0.01
R703 39K
C723 0.01
R716 2700
R763 3900
C748 0.056
R739 680
R746 2700
C737 68P
C749 16V10
T711 EIS5LC010A
SIF
AUDIO LEVEL
VR751 5KB
X710 EFCH38MWV3
R704 150K
R705 6800
R728 330
R701 180K
D710 MA3091M
C722 0.01
C730 16V33
R721 2700
R701 2KB
AGC
R720 2700
C732 0.01
QR713 MRN1402 (AFC DEF Ⓗ ON)
10K
10K
3.5
R7676 1500 (1W)
R7677 10K (1/4W)
C7677 0.01
GND
31.5V POWER REG
VCC1
DAC IN
GND
DAC OUT
BT IN
BT OUT
BAND SW
VCC2
B1
B2
B3
B4
VCC3
U
VL
12.9
11.9
0
0
0.5
12.1
2.2
0
32.0
1.3
20.5
20.4
20.9
IC7652 AN5043
C7676 0.01
C7665 0.01
R7691 10K
R7680 1K
C710 0.01
L711 0.56μ
R775 22K
R776 22K
L721 150μ
C771 0.01
D702 MA57
D701 MA57
R777 22K
C774 0.01
C790 47P
C773 0.01
L714 0.56μ
R780 10K
R781 10K
L723 150μ
D704 MA57
D703 MA57
Q771 MSD601 (BUFFER)
12.1
4.9
4.3
C707 50V0.47
C798 0.01
R773 4700
R774 5600
L722 150μ
QR717 MRN1404 (NTSC M Ⓗ:ON)
0.1
7.0
47K
47K
QR716 MRN1404 (PAL/SECAM:ON)
7.0
0.1
47K
47K
L764 47μ
C764 27P
X712 EFCS6R0MS5
C755 0.01
R752 10K
IC702 LA7975
MIX
L.P.F
500KHz OSC
AMP
VCC
GND
3.0
11.9
10.9
10.6
C752 82P
C754 0.01
C756 16V47
L751 10μ
R751 390
X715 VSX0547
X714 VSX0553
QR723 MRN1404 (PAL/SECAM:ON)
0
7.5
47K
47K
QR715 MRN1404 (PAL I:ON)
10.9
0.1
47K
47K
C758 0.01
C757 0.01
QR721 MRN1404 (PAL/SECAM:ON)
0
7.5
47K
47K
QR719 MRN1404 (PAL B.G.D/SECAM:ON)
0.1
4.8
47K
47K
QR722 MRN1404 (NTSC M Ⓗ:ON)
0.4
0.1
47K
47K
R788 10K
QR720 MRN1404 (NTSC M Ⓗ:ON)
7.5
0.1
47K
47K
R793 33K
QR724 MRN1404 (PAL/SECAM:ON)
0
7.5
47K
47K
4
5
6
7
8
9
10
11
12

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

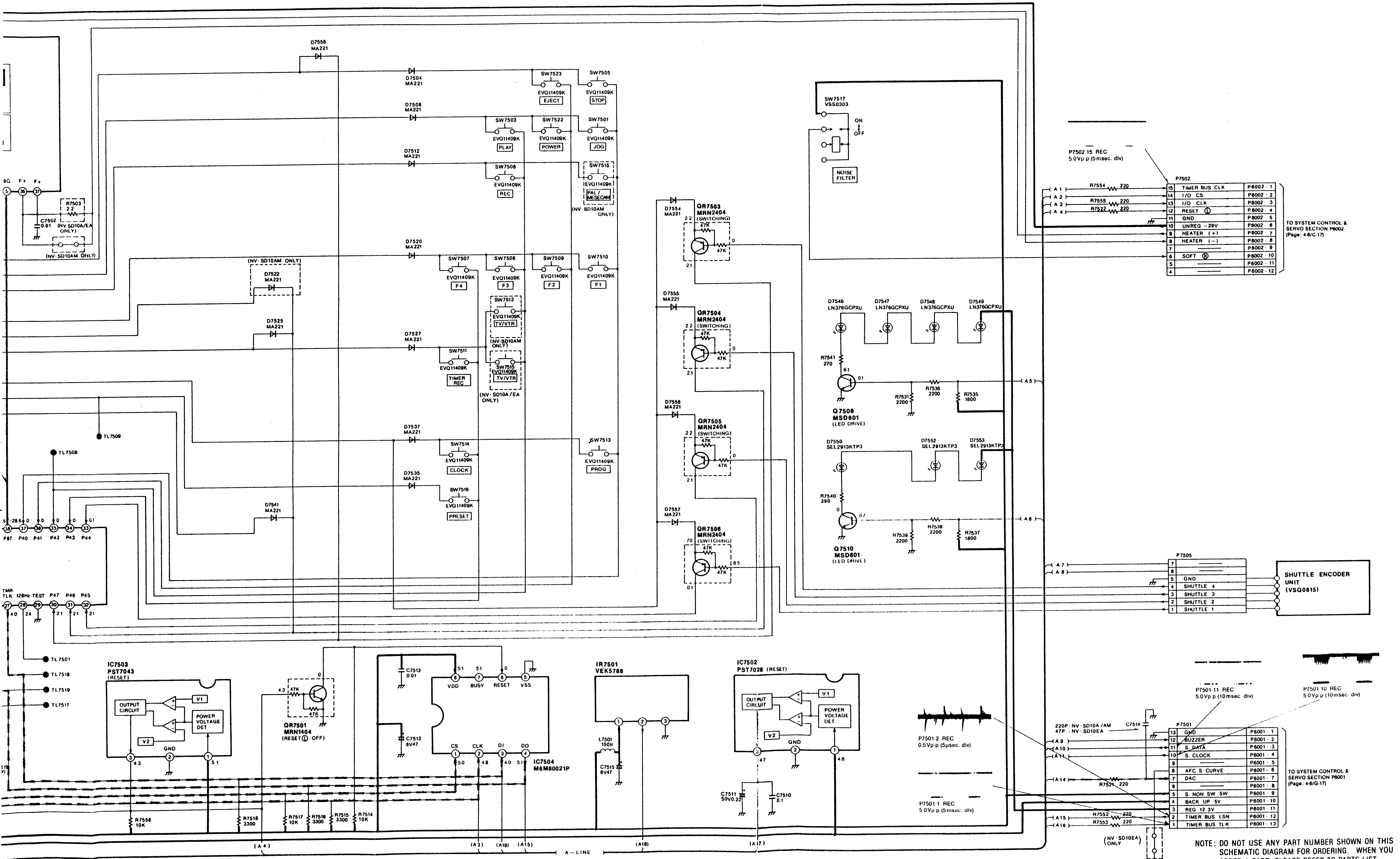
4-12. TIMER SCHEMATIC DIAGRAM (NV-SD10A/EA/AM)

—— SEGMENT CONTROL SIGNAL
—— GRID CONTROL SIGNAL


DP7501 VSL0271A,B
VTR
CATV SP SLP A.DUB REC
INSERT REMAIN WRITE MESECAM PDC VPS
SU MO TU WE TH FR SA PROG
R ON S AP COUNT OFF D AP
IC7501 MN187164VTSU
IC7501-2 STOP 2.8Vp-p (10μsec. div)
IC7502-5 STOP 2.0Vp-p (10μsec. div)
IC7502-6 STOP 5.0Vp-p (10μsec. div)
X7501 VSX0484
X7502 VSX0094
TIMER CLOCK
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
POWER VOLTAGE DET
QR7501 MRN1404 (RESET①: OFF)
IC7504 M6M80021P
IR7501 VEK5788
IC7502 PST7026 (RESET)
QR7503 MRN2404 (SWITCHING)
QR7504 MRN2404 (SWITCHING)
QR7505 MRN2404 (SWITCHING)
QR7506 MRN2404 (SWITCHING)
SW7523 EJECT
SW7505 STOP
SW7503 PLAY
SW7522 POWER
SW7501 JOG
SW7506 REC
SW7515 PAL/MESECAM (NV-SD10AM ONLY)
SW7507 F4
SW7508 F3
SW7509 F2
SW7510 F1
SW7512 TV/VTR (NV-SD10AM ONLY)
SW7515 TV/VTR (NV-SD10A/EA ONLY)
SW7511 TIMER REC
SW7514 CLOCK
SW7513 PROG
SW7516 PRESET
EVQ11409K
TL7509
TL7508
TL7501
TL7518
TL7519
TL7517
A-LINE
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11

NOTE: THE MEASUREM

—— SEGMENT CONTROL SIGNAL —— GRID CONTROL SIGNAL - - - TUNE CONTROL SIGNAL



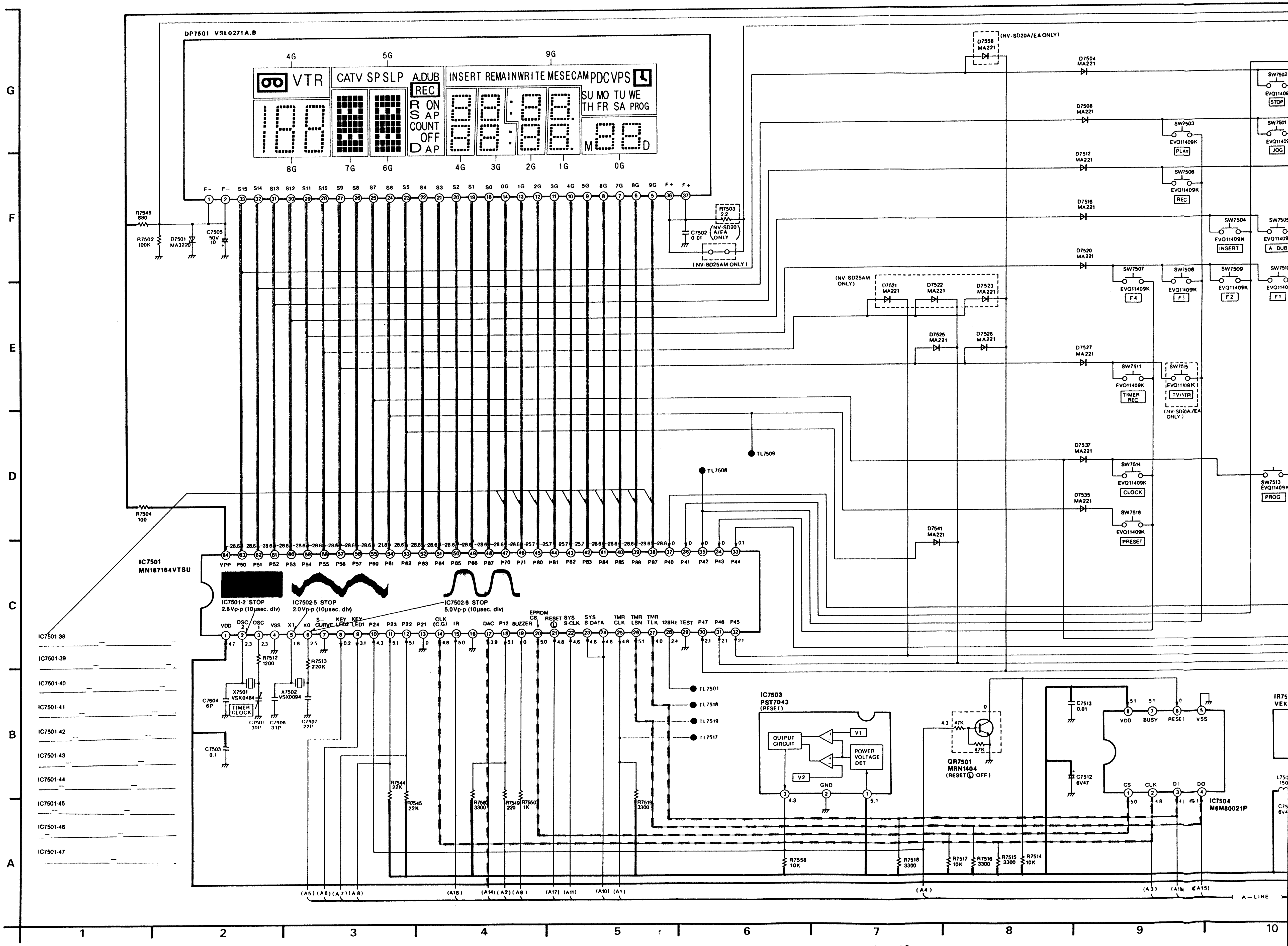
D7558 MA221
D7504 MA221
D7508 MA221
D7512 MA221
D7520 MA221
D7522 MA221
(NV·SD10AM ONLY)
D7525 MA221
D7527 MA221
D7537 MA221
D7535 MA221
D7541 MA221
SW7523 EVQ11409K EJECT
SW7505 EVQ11409K STOP
SW7503 EVQ11409K PLAY
SW7522 EVQ11409K POWER
SW7501 EVQ11409K JOG
SW7506 EVQ11409K REC
SW7518 EVQ11409K PAL / MESECAM
(NV·SD10AM ONLY)
SW7507 EVQ11409K F4
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7512 EVQ11409K TV/VTR
(NV·SD10AM ONLY)
SW7515 EVQ11409K TV/VTR
(NV·SD10A/EA ONLY)
SW7511 EVQ11409K TIMER REC
SW7514 EVQ11409K CLOCK
SW7516 EVQ11409K PRESET
SW7513 EVQ11409K PROG
R7503 22
C7502 0.01
(NV·SD10A/EA ONLY)
(NV·SD10AM ONLY)
9G F+ F+
TL7509
TL7508
P87 P40 P41 P42 P43 P44
TMR TLK 128Hz TEST P47 P46 P45
TL7501
TL7518
TL7519
TL7517
SW7517 VSS0303
ON OFF
NOISE FILTER
D7554 MA221
QR7503 MRN2404 (SWITCHING)
D7555 MA221
QR7504 MRN2404 (SWITCHING)
D7556 MA221
QR7505 MRN2404 (SWITCHING)
D7557 MA221
QR7506 MRN2404 (SWITCHING)
47K
D7546 LN376GCPXU
D7547 LN376GCPXU
D7548 LN376GCPXU
D7549 LN376GCPXU
R7541 270
Q7508 MSD601 (LED DRIVE)
R7531 2200
R7536 2200
R7535 1800
D7550 SEL2913KTP3
D7552 SEL2913KTP3
D7553 SEL2913KTP3
R7540 390
Q7510 MSD601 (LED DRIVE)
R7539 2200
R7538 2200
R7537 1800
(A5)
(A6)
(A7)
(A8)
P7505
7
8
5 GND
4 SHUTTLE 4
3 SHUTTLE 3
2 SHUTTLE 2
1 SHUTTLE 1
SHUTTLE ENCODER UNIT (VSQ0815)
P7502 15 REC
5.0Vp-p (5msec. div)
P7502
(A1) R7554 220
(A2)
(A3) R7555 220
(A4) R7522 220
15 TIMER BUS CLK P6002·1
14 I/O CS P6002·2
13 I/O CLK P6002·3
12 RESET Ⓛ P6002·4
11 GND P6002·5
10 UNREG −29V P6002·6
9 HEATER (+) P6002·7
8 HEATER (−) P6002·8
7 P6002·9
6 SOFT Ⓗ P6002·10
5 P6002·11
4 P6002·12
TO SYSTEM CONTROL & SERVO SECTION P6002 (Page: 4-6/C-17)
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET
GND
QR7501 MRN1404 (RESET Ⓛ: OFF)
C7513 0.01
C7512 6V47
VDD BUSY RESET VSS
CS CLK DI DO
IC7504 M6M80021P
IR7501 VEK5788
L7501 150μ
C7515 6V47
IC7502 PST7028 (RESET)
C7511 50V0.22
C7510 0.1
R7558 10K
R7516 3300
R7517 10K
R7518 3300
R7515 3300
R7514 10K
(A4)
(A3) (A16) (A15)
A—LINE
(A18)
(A17)
P7501-2 REC
0.5Vp-p (5μsec. div)
P7501-1 REC
5.0Vp-p (5msec. div)
P7501-11 REC
5.0Vp-p (10msec. div)
P7501-10 REC
5.0Vp-p (10msec. div)
220P: NV·SD10A/AM
47P: NV·SD10EA
C7514
P7501
(A9)
(A10)
(A11)
(A14) R7521 220
(A15) R7552 220
(A16) R7553 220
13 GND P6001·1
12 BUZZER P6001·2
11 S. DATA P6001·3
10 S. CLOCK P6001·4
9 P6001·5
8 AFC S·CURVE P6001·6
7 DAC P6001·7
6 P6001·8
5 S NON SW 5W P6001·9
4 BACK UP 5V P6001·10
3 REG 12.3V P6001·11
2 TIMER BUS LSN P6001·12
1 TIMER BUS TLK P6001·13
TO SYSTEM CONTROL & SERVO SECTION P6001 (Page: 4-6/G-17)
(NV·SD10EA ONLY)

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

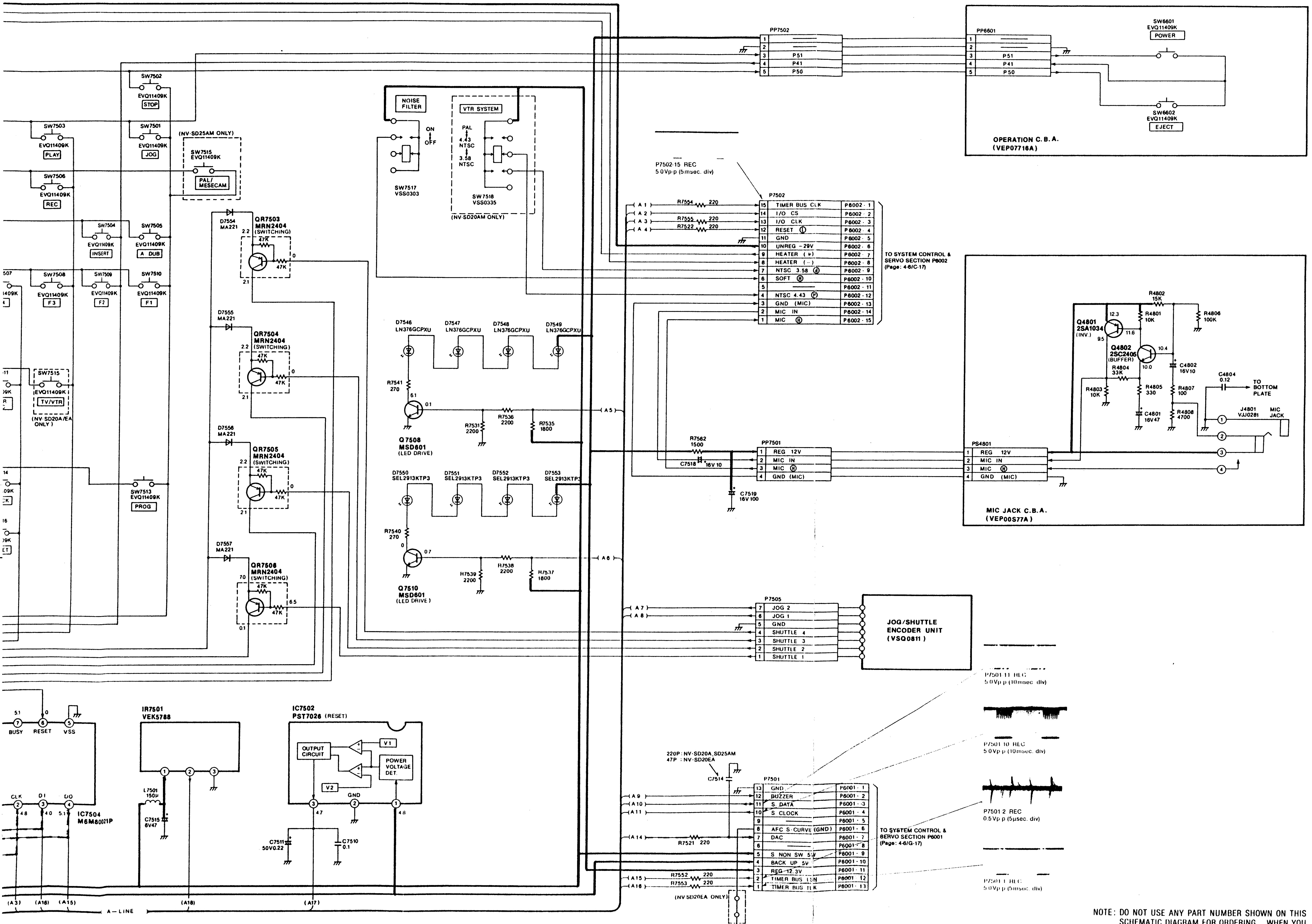
4-13. TIMER SCHEMATIC DIAGRAM (NV-SD20A/EA, SD25AM)

—— SEGMENT CONTROL SIGNAL —— GR



DP7501 VSL0271A,B
VTR
CATV SP SLP
A.DUB
REC
INSERT REMAIN WRITE MESECAM PDC VPS
SU MO TU WE
TH FR SA PROG
R ON
S AP
COUNT
OFF
D AP
4G
5G
9G
8G
7G
6G
3G
2G
1G
0G
F- F- S15 S14 S13 S12 S11 S10 S9 S8 S7 S6 S5 S4 S3 S2 S1 S0 0G 1G 2G 3G 4G 5G 6G 7G 8G 9G F+ F+
R7548 680
R7502 100K
D7501 MA3220
C7505 50V 10
C7502 0.01
R7503 2.2
(NV-SD20 A/EA ONLY)
(NV-SD25AM ONLY)
R7504 100
IC7501 MN187164VTSU
VPP P50 P51 P52 P53 P54 P55 P56 P57 P60 P61 P62 P63 P64 P65 P66 P67 P70 P71 P80 P81 P82 P83 P84 P85 P86 P87 P40 P41 P42 P43 P44
VDD OSC 2 OSC 1 VSS X1 X0 S-CURVE KEY LED2 KEY LED1 P24 P23 P22 P21 CLK (C.G) IR DAC P12 BUZZER EPROM CS RESET ① SYS S-CLK SYS S-DATA TMR CLK TMR LSN TMR TLK 128Hz TEST P47 P46 P45
IC7501-2 STOP 2.8Vp-p (10μsec. div)
IC7502-5 STOP 2.0Vp-p (10μsec. div)
IC7502-6 STOP 5.0Vp-p (10μsec. div)
IC7501-38
IC7501-39
IC7501-40
IC7501-41
IC7501-42
IC7501-43
IC7501-44
IC7501-45
IC7501-46
IC7501-47
X7501 VSX0484
TIMER CLOCK
X7502 VSX0094
C7604 6P
C7501 30P
C7506 33P
C7507 22P
C7503 0.1
R7512 1200
R7513 220K
R7544 22K
R7545 22K
R7550 3300
R7549 220
R7550 1K
R7519 3300
TL7501
TL7518
TL7519
TL7517
TL7508
TL7509
IC7503 PST7043 (RESET)
OUTPUT CIRCUIT
V1
V2
POWER VOLTAGE DET
GND
R7558 10K
R7518 3300
R7517 10K
R7516 3300
R7515 3300
R7514 10K
QR7501 MRN1404 (RESET ① OFF)
47K
C7513 0.01
C7512 6V47
VDD BUSY RESET VSS
CS CLK DI DO
IC7504 M6M80021P
D7558 MA221 (NV-SD20A/EA ONLY)
D7504 MA221
D7508 MA221
D7512 MA221
D7516 MA221
D7520 MA221
D7521 MA221
D7522 MA221
D7523 MA221
D7525 MA221
D7526 MA221
D7527 MA221
D7537 MA221
D7535 MA221
D7541 MA221
SW7502 EVQ11409K STOP
SW7501 EVQ11409K JOG
SW7503 EVQ11409K PLAY
SW7506 EVQ11409K REC
SW7504 EVQ11409K INSERT
SW7505 EVQ11409K A DUB
SW7507 EVQ11409K F4
SW7508 EVQ11409K F3
SW7509 EVQ11409K F2
SW7510 EVQ11409K F1
SW7511 EVQ11409K TIMER REC
SW7515 EVQ11409K TV/VTR (NV-SD20A/EA ONLY)
SW7514 EVQ11409K CLOCK
SW7513 EVQ11409K PROG
SW7516 EVQ11409K PRESET
(A5) (A6) (A7) (A8) (A18) (A14) (A2) (A9) (A17) (A11) (A10) (A1) (A4) (A3) (A16) (A15)
A-LINE
G F E D C B A
1 2 3 4 5 6 7 8 9 10

AL —— GRID CONTROL SIGNAL - - - TUNE CONTROL SIGNAL

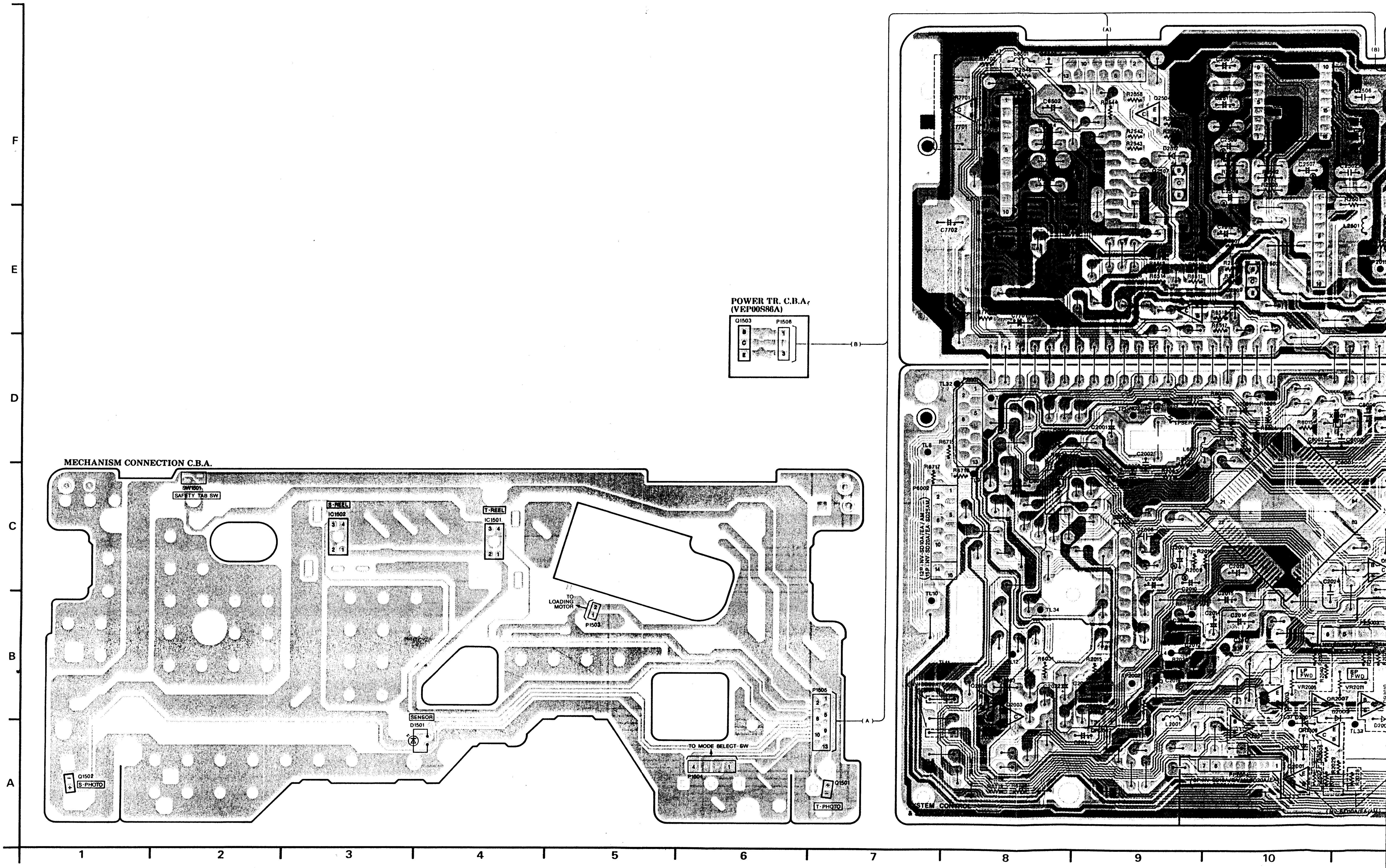

SW7502
EVQ11409K
STOP
SW7503
EVQ11409K
PLAY
SW7501
EVQ11409K
JOG
(NV-SD25AM ONLY)
SW7515
EVQ11409K
PAL/MESECAM
SW7506
EVQ11409K
REC
SW7504
EVQ11409K
INSERT
SW7505
EVQ11409K
A DUB
SW7508
EVQ11409K
F3
SW7509
EVQ11409K
F2
SW7510
EVQ11409K
F1
SW7515
EVQ11409K
TV/VTR
(NV-SD20A/EA ONLY)
SW7513
EVQ11409K
PROG
NOISE FILTER
ON
OFF
SW7517
VSS0303
VTR SYSTEM
PAL
4.43 NTSC
3.58 NTSC
SW7518
VSS0335
(NV-SD20AM ONLY)
D7554
MA221
QR7503
MRN2404
(SWITCHING)
D7555
MA221
QR7504
MRN2404
(SWITCHING)
D7556
MA221
QR7505
MRN2404
(SWITCHING)
D7557
MA221
QR7506
MRN2404
(SWITCHING)
47K
D7546
LN376GCPXU
D7547
LN376GCPXU
D7548
LN376GCPXU
D7549
LN376GCPXU
R7541
270
Q7508
MSD601
(LED DRIVE)
R7531
2200
R7536
2200
R7535
1800
D7550
SEL2913KTP3
D7551
SEL2913KTP3
D7552
SEL2913KTP3
D7553
SEL2913KTP3
R7540
270
Q7510
MSD601
(LED DRIVE)
R7539
2200
R7538
2200
R7537
1800
PP7502
P51
P41
P50
PP6601
SW6601
EVQ11409K
POWER
SW6602
EVQ11409K
EJECT
OPERATION C.B.A.
(VEP07716A)
P7502-15 REC
5.0Vp-p (5msec. div)
P7502
R7554 220
R7555 220
R7522 220
TIMER BUS CLK
I/O CS
I/O CLK
RESET
GND
UNREG -29V
HEATER (+)
HEATER (-)
NTSC 3.58
SOFT
NTSC 4.43
GND (MIC)
MIC IN
MIC
P6002-1 … P6002-15
TO SYSTEM CONTROL & SERVO SECTION P6002
(Page: 4-6/C-17)
R4802
15K
R4801
10K
R4806
100K
Q4801
2SA1034
(INV.)
Q4802
2SC2406
(BUFFER)
R4804
33K
R4803
10K
R4805
330
C4802
16V10
R4807
100
C4804
0.12
TO BOTTOM PLATE
C4801
16V47
R4808
4700
J4801
VJJ0281
MIC JACK
R7562
1500
C7518 16V 10
PP7501
REG 12V
MIC IN
MIC
GND (MIC)
C7519
16V 100
PS4801
MIC JACK C.B.A.
(VEP00S77A)
P7505
JOG 2
JOG 1
GND
SHUTTLE 4
SHUTTLE 3
SHUTTLE 2
SHUTTLE 1
JOG/SHUTTLE ENCODER UNIT
(VSQ0811)
P7501 11 REC
5.0Vp-p (10msec. div)
P7501 10 REC
5.0Vp-p (10msec. div)
P7501 2 REC
0.5Vp-p (5μsec. div)
P7501 1 REC
5.0Vp-p (5msec. div)
220P : NV-SD20A,SD25AM
47P : NV-SD20EA
C7514
P7501
GND
BUZZER
S. DATA
S. CLOCK
AFC S-CURVE (GND)
DAC
R7521 220
S. NON SW 5V
BACK UP 5V
REG 12.3V
TIMER BUS CSN
TIMER BUS CLK
R7552 220
R7553 220
(NV-SD20EA ONLY)
P6001-1 … P6001-13
TO SYSTEM CONTROL & SERVO SECTION P6001
(Page: 4-6/G-17)
BUSY
RESET
VSS
IR7501
VEK5788
L7501
150μ
C7515
6V47
IC7502
PST7026 (RESET)
OUTPUT CIRCUIT
POWER VOLTAGE DET.
GND
C7511
50V0.22
C7510
0.1
CLK
DI
DO
IC7504
M6M80021P
(A1) (A2) (A3) (A4) (A5) (A6) (A7) (A8) (A9) (A10) (A11) (A14) (A15) (A16) (A17) (A18)
A-LINE

NOTE: THE MEASUREMENT MODE OF THE DC VOLTAGE ON THIS DIAGRAM IS STOP MODE.

NOTE: DO NOT USE ANY PART NUMBER SHOWN ON THIS SCHEMATIC DIAGRAM FOR ORDERING. WHEN YOU ORDER A PART, PLEASE REFER TO PARTS LIST.

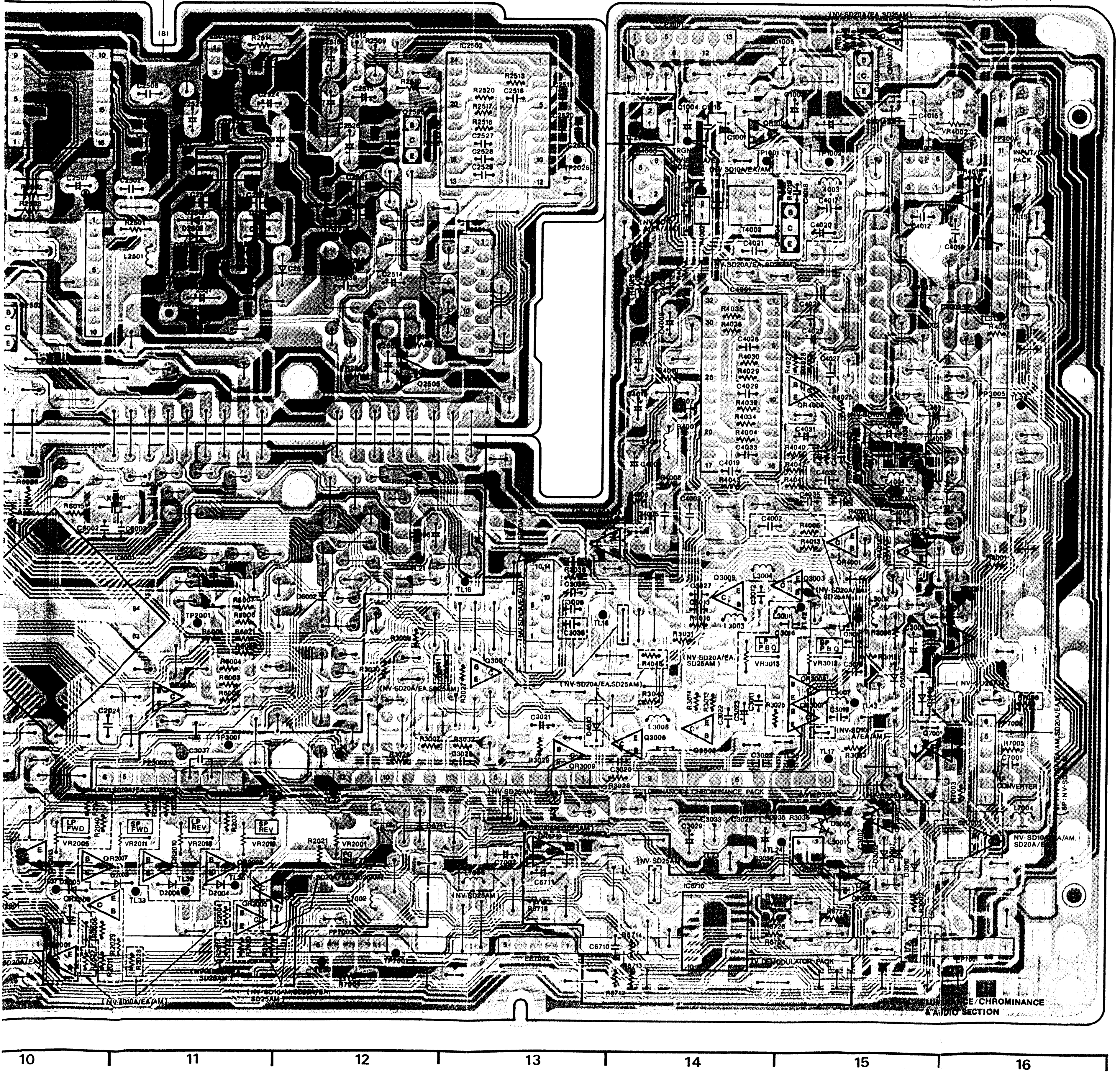
9 10 11 12 13 14 15 16 17 18

4-14. MAIN C.B.A. (VEP03971B: NV-SD10A) (VEP03971S: NV-SD10EA) (VEP03971D: NV-SD10AM) (VEP03971A: NV-SD20A) (VEP03971R: NV-SD20EA) (VEP0397


F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
POWER TR. C.B.A.
(VEP00S86A)
Q1503
B
C
E
P1506
1
3
(B)
(A)
MECHANISM CONNECTION C.B.A.
SW1501
SAFETY TAB SW
S·REEL
IC1502
T·REEL
IC1501
3
4
2
1
TO LOADING MOTOR
P1503
SENSOR
D1501
TO MODE SELECT SW
P1504
P1505
Q1502
S·PHOTO
Q1501
T·PHOTO
C7702
R7701
Q2504
R2558
R2542
R2543
D2512
C2507
C2506
L2501
R2501
R6514
TL32
TL8
R6715
R6717
P6002
TL10
TL34
TL33
IC6001
C2001
C2002
C2016
C2021
C2022
R6031
R2015
TP2002
L2001
LP FWD
SP FWD
VR2005
VR2011
R2040
QR2007
QR2009
QR2001
Q2003
D2002
D2003
Q2001
R2028
R2029
P2001
SYSTEM CONTROL

20EA) (VEP03971C: NV-SD25AM)

MAIN C.B.A. (VEP03971B: NV-SD10A) (VEP03971S: NV-SD10EA) (VEP03971D: NV-SD10AM) (VEP03971A: NV-SD20A) (VEP03971R: NV-SD20EA) (VEP03971C: NV-SD25AM)



LUMINANCE & CHROMINANCE PACK
TV DEMODULATOR PACK
LUMINANCE/CHROMINANCE & AUDIO SECTION
INPUT/OUTPUT PACK
CONVERTER
VR2005
VR2011
VR2018
VR2019
VR2001
VR3013
VR3012
10
11
12
13
14
15
16

MAIN C.B.A. ADDRESS INFORMATION

SYSTEM CONTROL & SERVO Section

Transistor

Q2001	A-10
Q2002	A-12
Q2003	B-8
Q2004	B-8

Transistor & Resistor

QR2001	A-10
QR2002	A-9
QR2005	A-11
QR2007	B-10
QR2008	B-11
QR2009	A-10
QR2010	B-11
QR2013	B-10
QR6005	C-11
QR6710	B-13

Integrated Circuit

IC6001	C-11
IC6710	A-14

Test Point

TP2001	C-11
TP2002	B-9
TP2009	C-9
TPGND2	D-9
TPSERV	D-9

Adjustment

VR2001	B-12
VR2005	B-10
VR2011	B-11
VR2018	B-11
VR2019	B-11

Connector

P6001	D-8
P6002	C-7
P6003	F-14

ADDRESS INFORMATION

SUB SERVO Section

Transistor

Q1501	A-7
Q1502	A-1
Q1503	D-6
Q2502	E-10
Q2504	F-9
Q2505	E-12
Q2506	F-12
Q2507	F-9

Transistor & Resistor

QR6501	E-8
QR6502	E-9
QR7701	F-8

Integrated Circuit

IC1501	C-4
IC1502	C-3
IC2501	F-10
IC2502	F-13
IC2503	F-11
IC6501	F-8
IC6502	E-8

Test Point

TP2015	E-11
TP2026	F-13

Connector

P1503	B-5
P1504	A-6
P1505	B-7
P1506	D-6
P2501	E-13
P2502	F-11
P2503	F-10
P6501	F-9

ADDRESS INFORMATION

LUMINANCE/ CHROMINANCE & AUDIO Section

Transistor

Q3001	C-16
Q3002	B-14
Q3003	C-15
Q3005	C-14
Q3006	B-14
Q3007	C-13
Q4001	F-16
Q4002	F-15
Q4004	E-14
Q4005	D-13
Q7001	B-15

Transistor & Resistor

QR1001	F-14
QR3001	B-15
QR3005	A-15
QR3007	C-15
QR3008	C-15
QR3009	B-13
QR3010	B-15
QR4001	D-15
QR4002	F-15
QR4004	D-15
QR4005	D-15
QR7001	B-16

Integrated Circuit

IC4001	E-14

Test Point

TP1001	F-14
TP1002	F-15
TP3002	C-16
TP4002	E-14
TP4003	E-14
TPGND1	F-14

Adjustment

VR3012	C-15
VR3013	C-14

Connector

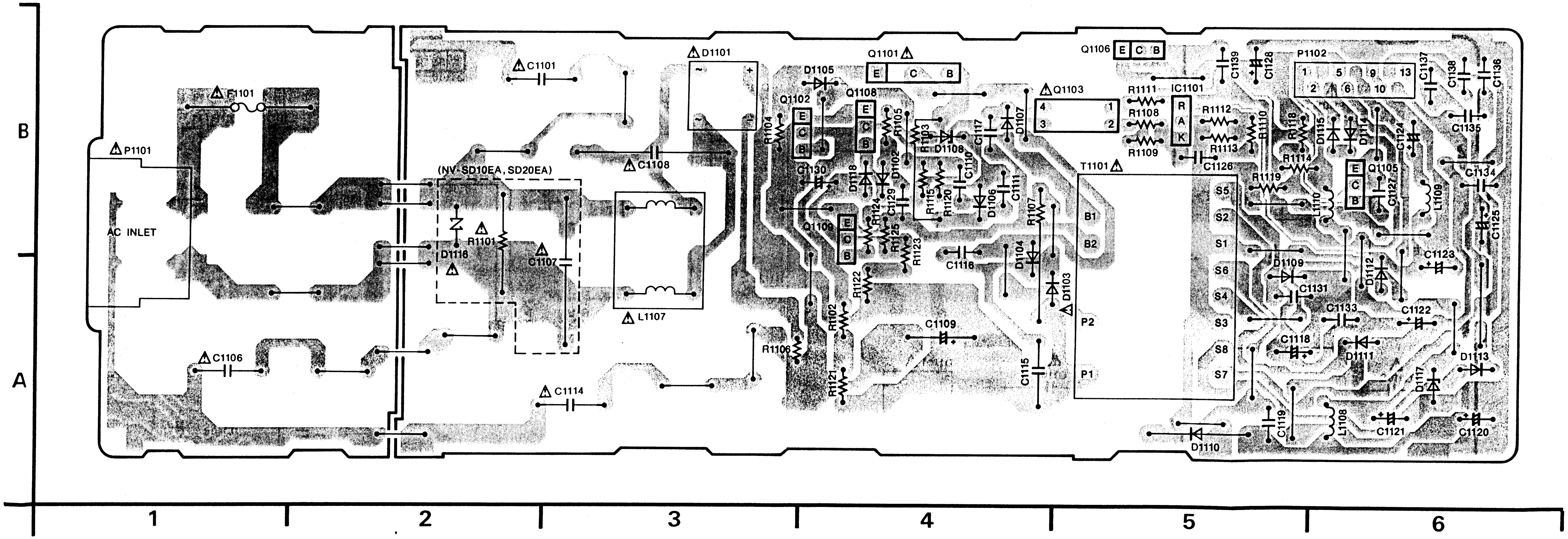
P1001	F-14
P3001	C-13
P4003	F-14
PP3001	B-14
PP3002	B-13
PP3004	F-16
PP3005	D-16
PP7001	A-16
PP7002	A-13
PP7003	A-12
PP7004	A-10
PP7005	B-16

ADDRESS INFORMATION

4-15. POWER C.B.A. (VEP01518F: NV-SD10A, SD20A) (VEP01518E: NV-SD10EA, SD20EA)

POWER C.B.A.	
Transistor	
Q1101	B-4
Q1102	B-3
Q1103	B-5
Q1105	B-6
Q1106	B-5
Q1108	B-4
Q1109	B-4
Integrated Circuit	
IC1101	B-5
Connector	
P1101	B-1
P1102	B-6

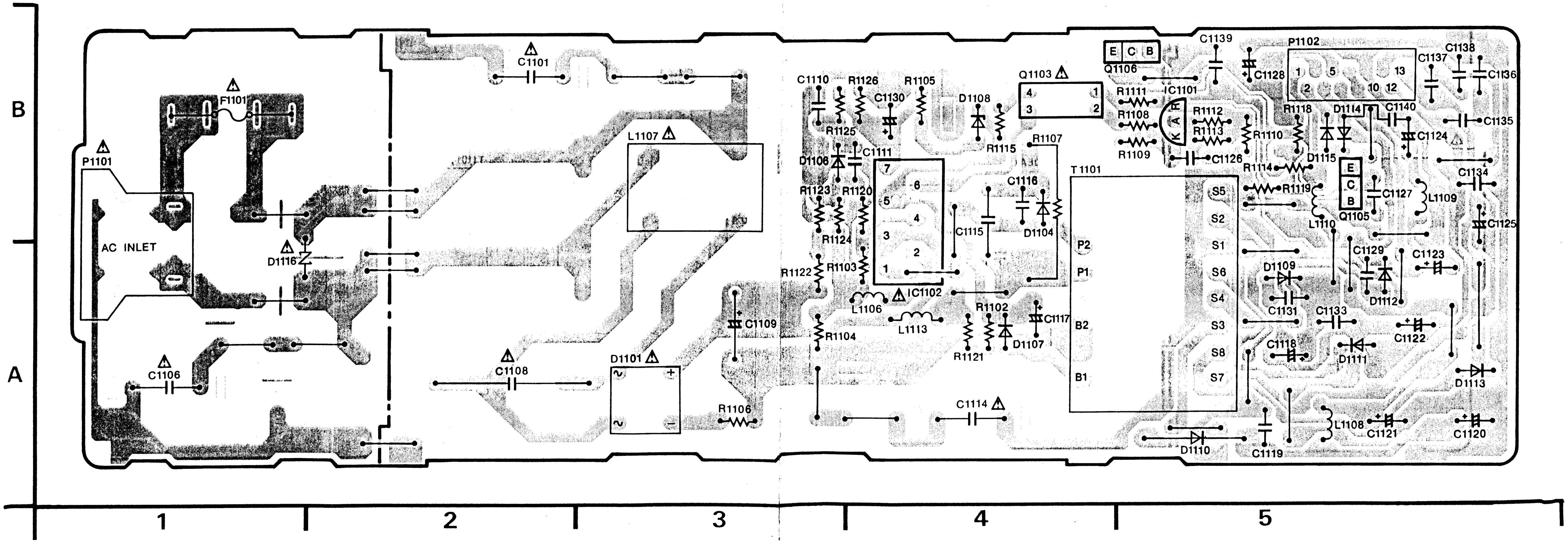
ADDRESS INFORMATION


B
A
1
2
3
4
5
6
⚠P1101
AC INLET
⚠F1101
⚠C1106
⚠C1101
⚠C1108
⚠C1114
(NV-SD10EA, SD20EA)
D1116
⚠R1101
⚠C1107
⚠L1107
⚠D1101
Q1101⚠
E C B
D1105
Q1102
Q1108
Q1109
R1104
R1105
R1103
D1108
C1117
D1107
C1130
D1118
D1102
C1129
R1124
R1125
R1123
R1115
R1120
C1110
D1106
C1111
R1107
R1122
R1102
R1106
R1121
C1116
D1104
D1103⚠
C1109
C1115
⚠Q1103
Q1106
R1111
R1108
R1109
IC1101
R A K
R1112
R1113
C1126
R1110
T1101⚠
B1
B2
P2
P1
S5
S2
S1
S6
S4
S3
S8
S7
C1139
C1128
P1102
1 5 9 13
2 6 10
C1137
C1138
C1136
C1135
R1118
D1115
D1114
C1124
R1114
R1119
Q1105
C1127
L1110
L1109
C1134
C1125
D1109
C1131
D1112
C1123
C1133
C1122
C1118
D1111
D1113
D1117
C1119
L1108
C1121
C1120
D1110

4-16. POWER C.B.A. (VEP01525A: NV-SD10AM, SD25AM)

POWER C.B.A.	
Transistor	
Q1103	B-4
Q1105	B-5
Q1106	B-5
Integrated Circuit	
IC1101	B-5
IC1102	A-4
Connector	
P1101	B-1
P1102	B-5

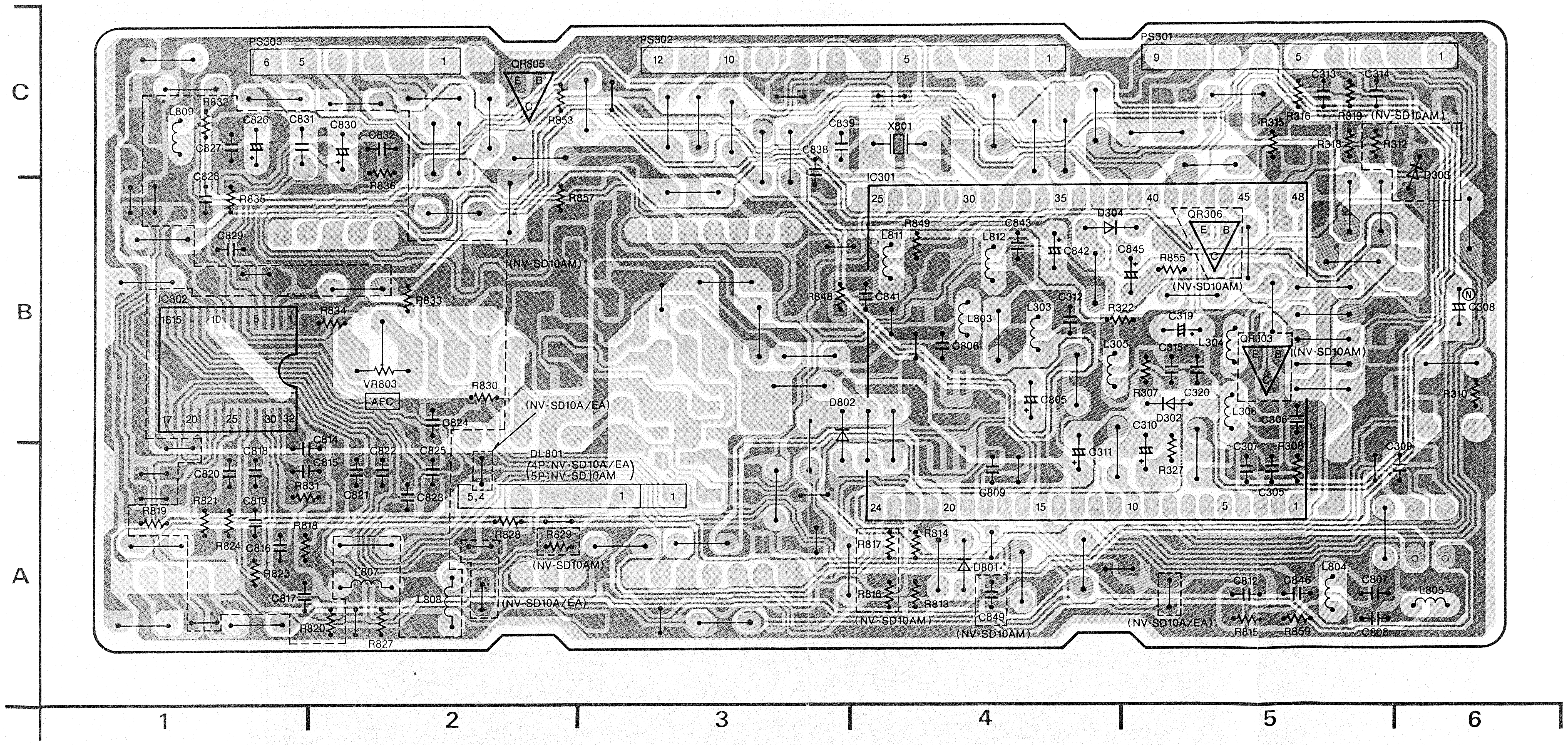
ADDRESS INFORMATION


B
A
1
2
3
4
5
P1101
AC INLET
F1101
D1116
C1106
C1101
C1108
L1107
D1101
C1109
R1106
C1110
R1126
R1105
C1130
R1125
D1106
C1111
R1123
R1120
R1124
R1122
R1103
L1106
IC1102
L1113
R1104
D1108
R1115
R1107
C1116
C1115
D1104
R1102
R1121
D1107
C1117
C1114
Q1103
T1101
P2
P1
B2
B1
S5
S2
S1
S6
S4
S3
S8
S7
Q1106
R1111
R1108
R1109
IC1101
R1112
R1113
R1110
C1126
C1139
C1128
P1102
R1118
D1114
D1115
C1140
C1124
R1114
R1119
L1110
Q1105
C1127
L1109
C1134
C1125
C1129
D1109
D1112
C1123
C1131
C1133
C1122
C1118
D1111
D1113
L1108
C1121
C1120
D1110
C1119
C1137
C1138
C1136
C1135
E
C
B

4-17. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975B: NV-SD10A/EA) (VEP03975D: NV-SD10AM)

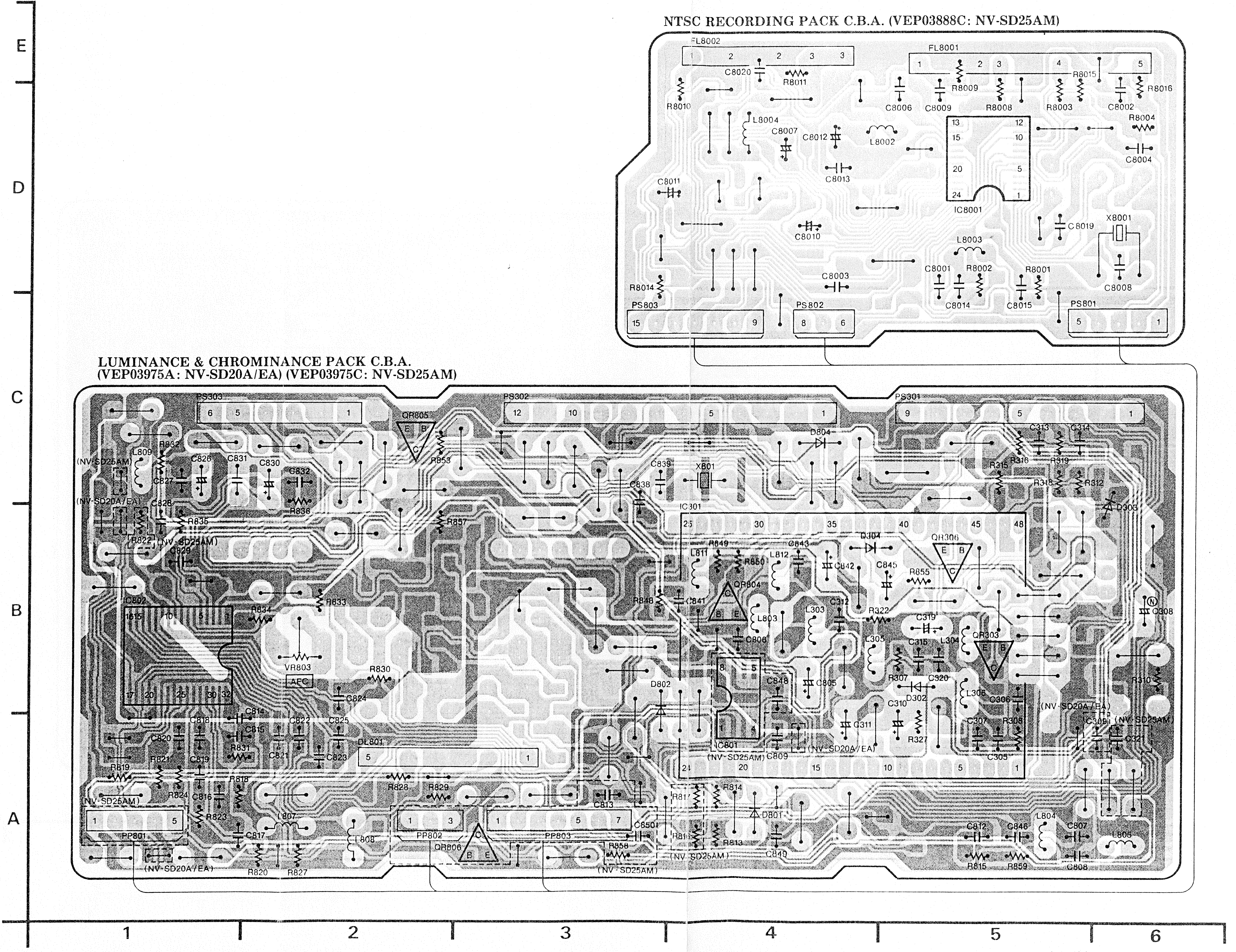
LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor & Resistor	
QR303	B-5
QR306	B-5
QR805	C-2
Integrated Circuit	
IC301	B-4
IC802	B-1
Adjustment	
VR803	B-2
Connector	
PS301	C-5
PS302	C-3
PS303	C-1

ADDRESS INFORMATION



C
B
A
1
2
3
4
5
6
PS303
PS302
PS301
QR805
E
B
C
R853
R857
L809
R832
C826
C831
C830
C832
C827
R836
C828
R835
C829
R833
R834
IC802
1515
10
5
17
20
25
30
32
VR803
AFC
R830
C824
(NV-SD10AM)
(NV-SD10A/EA)
DL801
(4P:NV-SD10A/EA)
(5P:NV-SD10AM)
C814
C815
C818
C820
C822
C825
R831
C821
C823
R821
C819
R819
R824
R818
C816
R823
L807
C817
R820
R827
L808
R828
R829
C839
C838
X801
IC301
25
30
35
40
45
48
24
20
15
10
5
1
R849
L811
C843
L812
C842
D304
C845
QR306
R855
R848
C841
L803
L303
C312
C806
R322
C319
L305
C315
L304
QR303
C805
D802
R307
C320
D302
C310
L306
C306
C311
C309
C307
R308
R327
C305
C308
R310
C313
C314
R315
R316
R319
(NV-SD10AM)
R318
R312
D303
R817
R814
D801
R816
R813
C849
C812
C846
L804
C807
L805
R815
R859
C808

4-18. LUMINANCE & CHROMINANCE PACK C.B.A. (VEP03975A: NV-SD20A/EA) (VEP03975C: NV-SD25AM)



NTSC RECORDING PACK C.B.A. (VEP03888C: NV-SD25AM)

LUMINANCE & CHROMINANCE PACK C.B.A.
(VEP03975A: NV-SD20A/EA) (VEP03975C: NV-SD25AM)

E
D
C
B
A
1
2
3
4
5
6
FL8002
FL8001
C8020
R8011
R8010
R8009
R8008
R8003
R8015
R8016
C8002
C8006
C8009
L8004
C8007
C8012
L8002
IC8001
R8004
C8004
C8011
C8013
C8010
C8019
X8001
L8003
C8001
R8002
R8001
C8003
C8014
C8015
C8008
R8014
PS803
PS802
PS801
PS303
PS302
PS301
QR805
R853
D804
C313
C314
R315
R316
R319
R318
R312
D303
L809
R832
C826
C831
C830
C832
C827
R836
C838
C839
X801
IC301
R835
R857
R822
C829
(NV-SD25AM)
(NV-SD20A/EA)
C828
R849
C843
L811
R850
L812
C842
D304
C845
QR306
R855
QR804
R848
C841
L803
C806
L303
C312
R322
C319
C308
L305
C315
L304
QR303
IC802
R834
R833
VR803
AFC
R830
D802
C848
C805
R307
C320
D302
L306
C306
R310
C310
C311
R327
C307
R308
C305
IC305
C321
C824
C814
C818
C822
C825
C815
C820
R831
C821
C823
DL801
IC801
(NV-SD25AM)
C809
(NV-SD20A/EA)
R821
C819
R819
R818
R828
R829
C813
R814
R817
D801
R824
C816
R823
L807
C817
L808
PP801
PP802
QR806
PP803
C850
R816
R813
C849
C812
C846
L804
C807
L805
R820
R827
R858
R815
R859
C808
(NV-SD20A/EA)
(NV-SD25AM)

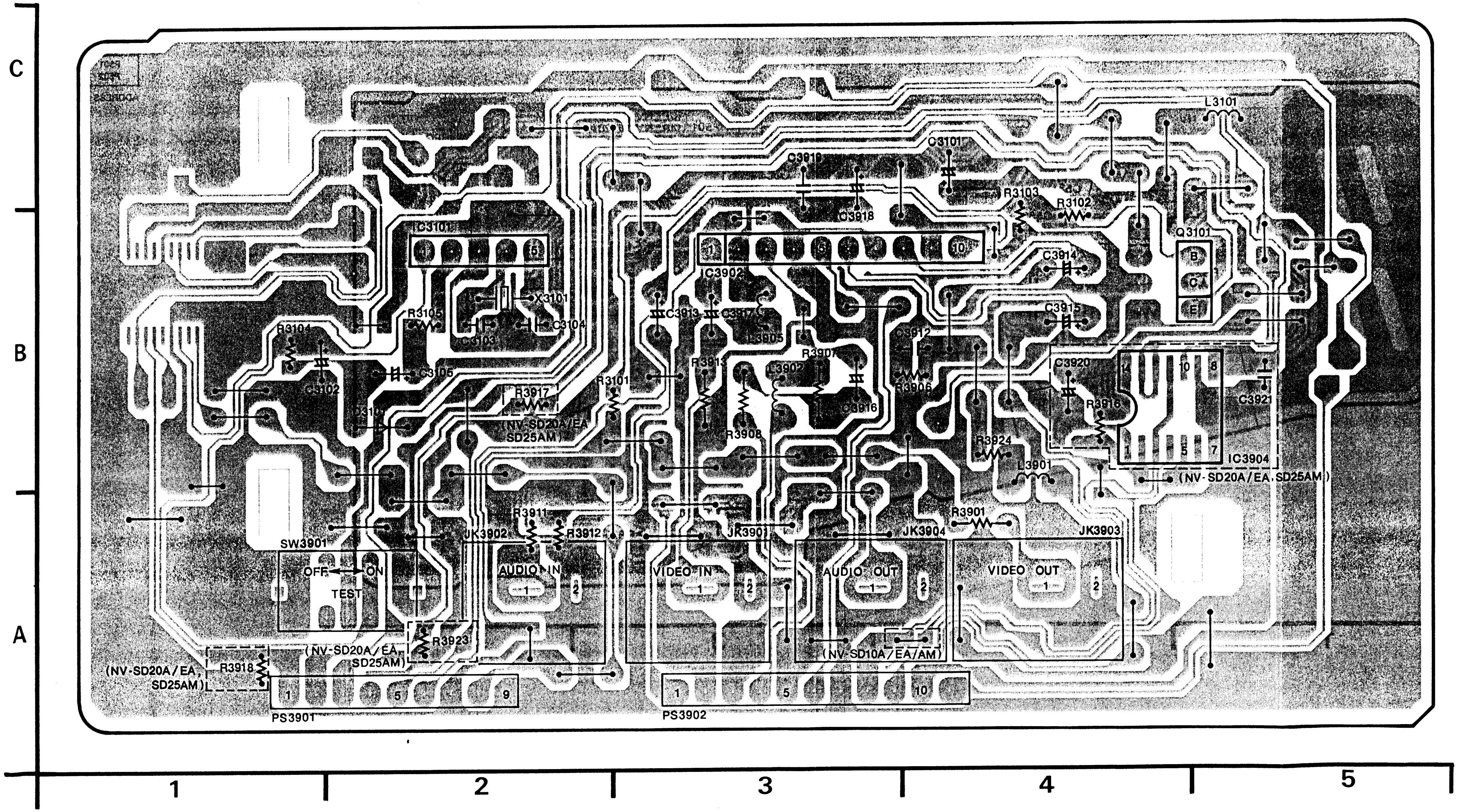
LUMINANCE & CHROMINANCE PACK C.B.A.	
Transistor & Resistor	
QR303	B-5
QR306	B-5
QR804	B-4
QR805	C-2
QR806	A-3
Integrated Circuit	
IC301	B-4
IC801	A-4
IC802	B-1
IC8001	D-5
Adjustment	
VR803	B-2
Connector	
PP801	A-1
PP802	A-2
PP803	A-3
PS301	C-5
PS302	C-3
PS303	C-1
PS801	C-5
PS802	C-4
PS803	C-3

ADDRESS INFORMATION

4-19. INPUT/OUTPUT PACK C.B.A. (VEP03972B: NV-SD10A/EA/AM) (VEP03972A: NV-SD20A/EA, SD25AM)

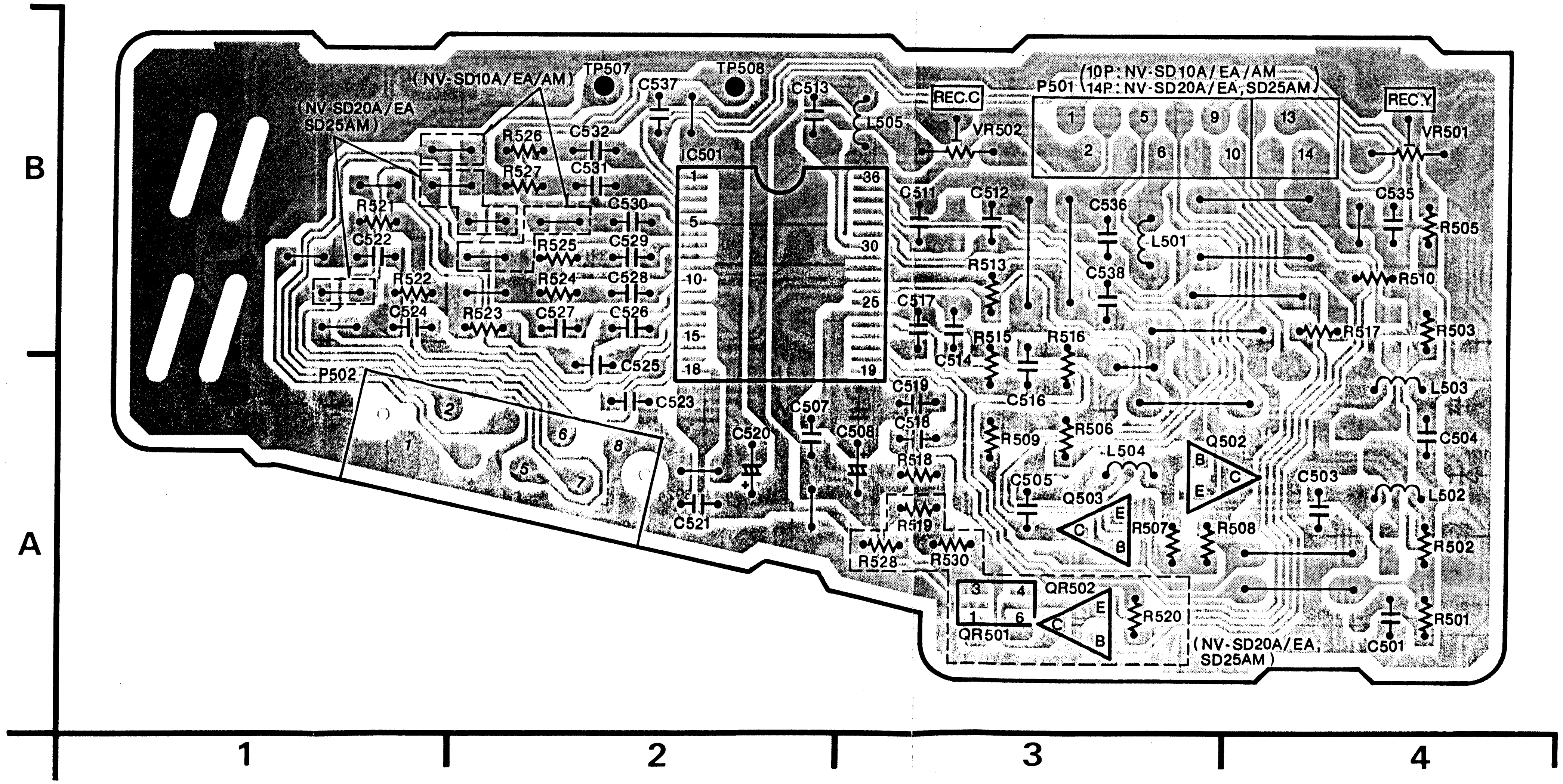
INPUT/OUTPUT PACK C.B.A.	
Transistor	
Q3101	B-5
Integrated Circuit	
IC3101 IC3902 IC3904	B-2 B-3 B-5
Connector	
PS3901 PS3902	A-1 A-3

ADDRESS INFORMATION



C
B
A
1
2
3
4
5
L3101
C3101
C3919
C3918
R3103
R3102
Q3101
B
C
E
IC3101
5
X3101
C3104
C3103
R3105
R3104
C3102
C3105
R3917
(NV-SD20A/EA, SD25AM)
R3101
IC3902
1
10
C3913
C3917
C3905
C3912
R3913
L3902
R3907
C3916
R3908
R3906
C3914
C3915
C3920
C3921
R3916
R3924
L3901
IC3904
14
10
8
5
7
(NV-SD20A/EA, SD25AM)
R3901
R3911
R3912
SW3901
OFF
ON
TEST
R3923
(NV-SD20A/EA, SD25AM)
(NV-SD20A/EA, SD25AM)
R3918
JK3902
AUDIO IN
JK3901
VIDEO IN
JK3904
AUDIO OUT
JK3903
VIDEO OUT
1
2
(NV-SD10A/EA/AM)
PS3901
1
5
9
PS3902
1
5
10

4-20. HEAD AMP C.B.A. (VEP05180B: NV-SD10A/EA/AM) (VEP05180A: NV-SD20A/EA, SD25AM)


B
A
1
2
3
4
(NV-SD10A/EA/AM)
(NV-SD20A/EA SD25AM)
TP507
TP508
C537
C513
L505
REC.C
VR502
P501
(10P: NV-SD10A/EA/AM 14P: NV-SD20A/EA, SD25AM)
1 5 9 13
2 6 10 14
REC.Y
VR501
R526
C532
R527
C531
IC501
1
5
10
15
18
36
30
25
19
C530
R521
C522
R525
C529
R522
R524
C528
C524
R523
C527
C526
C525
P502
C523
C511
C512
C536
L501
C538
R513
C517
C514
R515
R516
C516
C519
C518
C507
C508
C520
C521
R509
R506
L504
C505
Q503
Q502
C503
R518
R519
R528
R530
R507
R508
QR502
QR501
R520
(NV-SD20A/EA, SD25AM)
C535
R505
R510
R517
R503
L503
C504
L502
R502
R501
C501
C
E
B

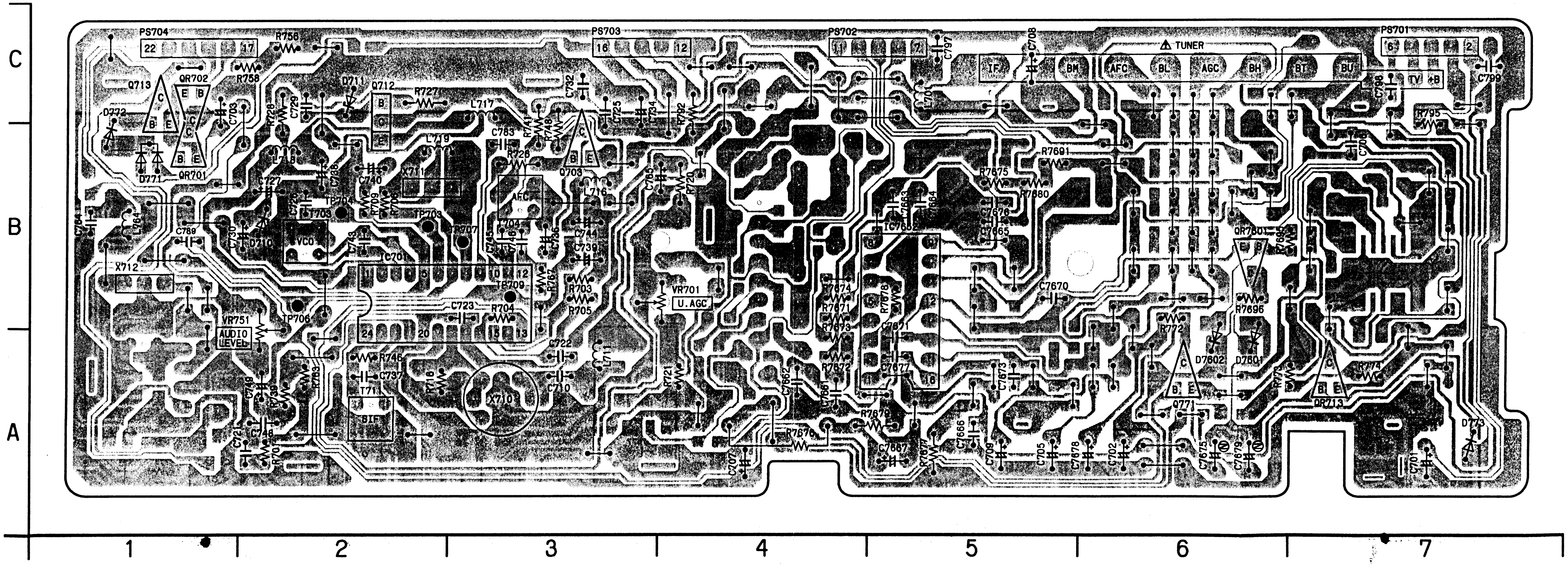
HEAD AMP C.B.A.	
Transistor	
Q502	A-3
Q503	A-3
Transistor & Resistor	
QR501	A-3
QR502	A-3
Integrated Circuit	
IC501	B-2
Test Point	
TP507	B-2
TP508	B-2
Adjustment	
VR501	B-4
VR502	B-3
Connector	
P501	B-3
P502	A-1

ADDRESS INFORMATION

4-21. TV DEMODULATOR PACK C.B.A. (VEP07629K: NV-SD10A, SD20A) (VEP07629L: NV-SD10EA/AM, SD20EA)

TV DEMODULATOR PACK C.B.A.	
Transistor	
Q703	B-3
Q712	C-2
Q713	C-1
Q771	A-6
Transistor & Resistor	
QR701	B-1
QR702	C-1
QR713	A-7
QR7601	B-6
Integrated Circuit	
IC701	B-2
IC7652	B-5
Test Point	
TP703	B-2
TP704	B-2
TP706	B-2
TP707	B-3
TP709	B-3
Adjustment	
T703	B-2
T704	B-3
T711	A-2
VR701	B-4
VR751	B-2
Connector	
PS701	C-7
PS702	C-4
PS703	C-3
PS704	C-1

ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
7
PS704
22
17
R756
R758
Q713
QR702
D772
D771
QR701
D711
Q712
R727
L717
L719
X711
C783
R726
Q703
AFC
T716
PS703
16
12
PS702
11
7
C797
C708
TUNER
IF
BM
AFC
BL
AGC
BH
BT
BU
TV
+B
PS701
6
2
C799
R795
R7691
R7675
R7680
IC7652
R7674
R7671
R7673
R7672
C7670
QR7601
R7696
R772
D7602
D7601
Q771
QR713
R774
D773
X712
VR751
AUDIO LEVEL
TP706
TP703
TP704
TP705
TP707
TP709
VCO
IC701
1
10
12
24
20
15
13
C723
R704
R703
R705
VR701
U.AGC
R746
C737
T711
BIF
X710
C722
C710
R721
R7676
R7679
C7667
R7677
C7666
C709
C705
C7678
C702
C7675
C7679
C701
C707
C721
R701
C748
R739
R763
C789
C784
L764
C730
D710

4-22. TV DEMODULATOR PACK C.B.A. (VEP07705A: NV-SD25AM)

TV DEMODULATOR PACK C.B.A.

Transistor	
Q703	B-4
Q712	B-4
Q713	C-1
Q771	A-6

Transistor & Resistor	
QR702	C-2
QR713	A-7
QR715	B-1
QR716	A-2
QR717	A-2
QR718	C-2
QR719	B-1
QR720	B-1
QR721	B-1
QR722	B-1
QR723	A-1
QR724	B-2
QR7601	B-6

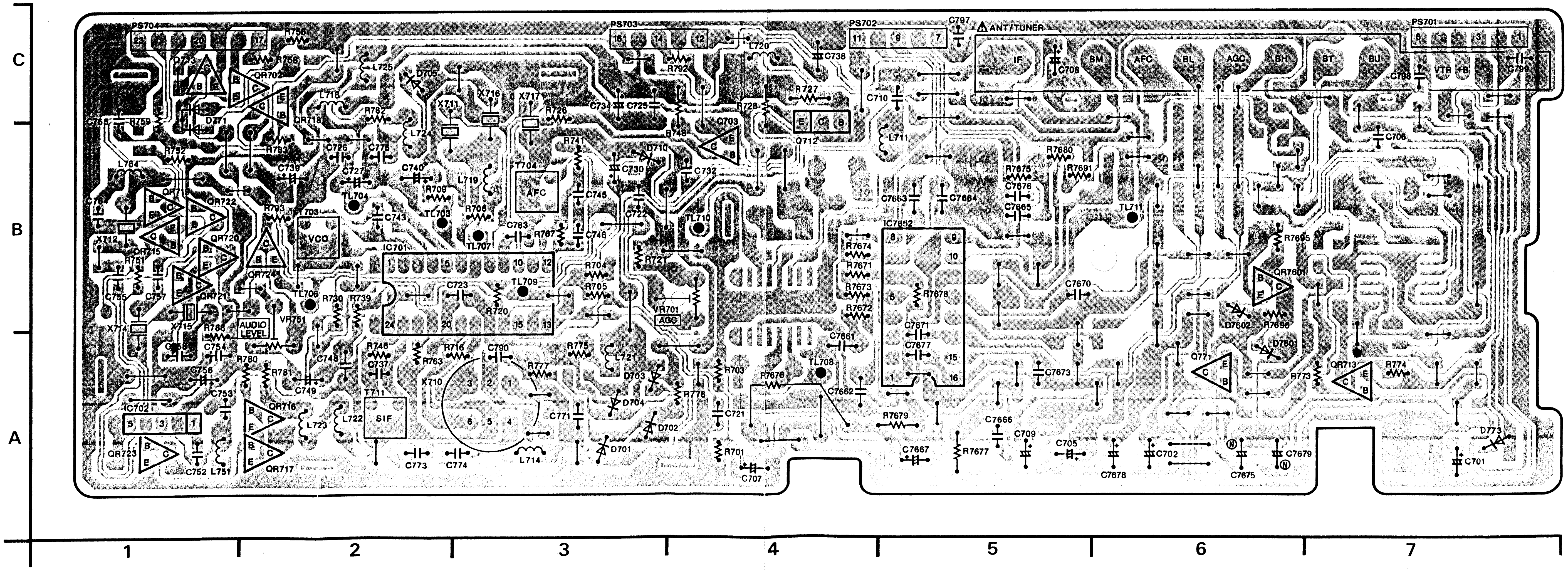
Integrated Circuit	
IC701	B-2
IC702	A-1
IC7652	B-5

Test Point	
TL703	B-2
TL704	B-2
TL706	B-2
TL707	B-3
TL708	A-4
TL709	B-3
TL710	B-4
TL711	B-6

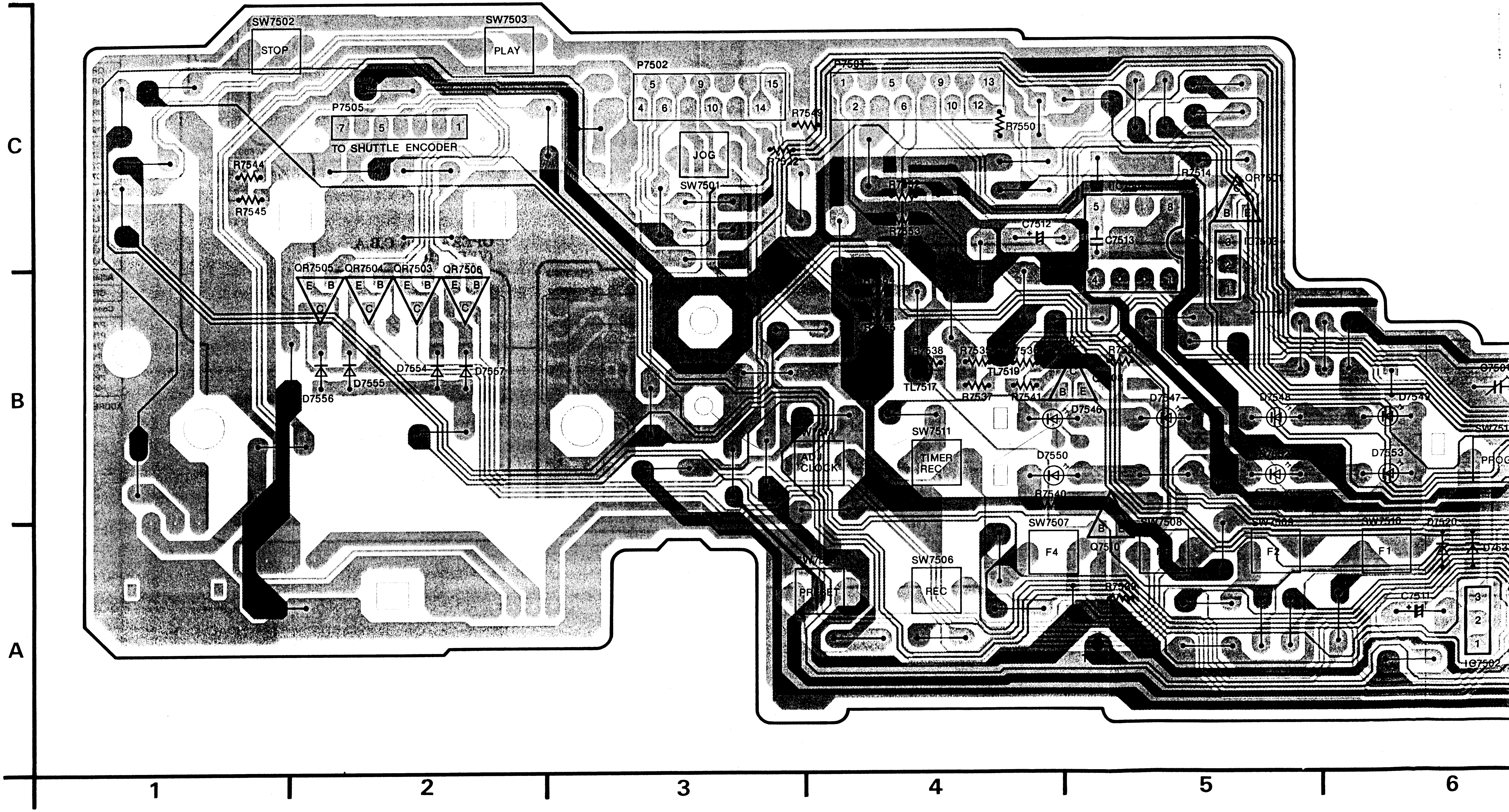
Adjustment	
T703	B-2
T704	B-3
T711	A-2
VR701	B-4
VR751	B-2

Connector	
PS701	C-7
PS702	C-4
PS703	C-3
PS704	C-1

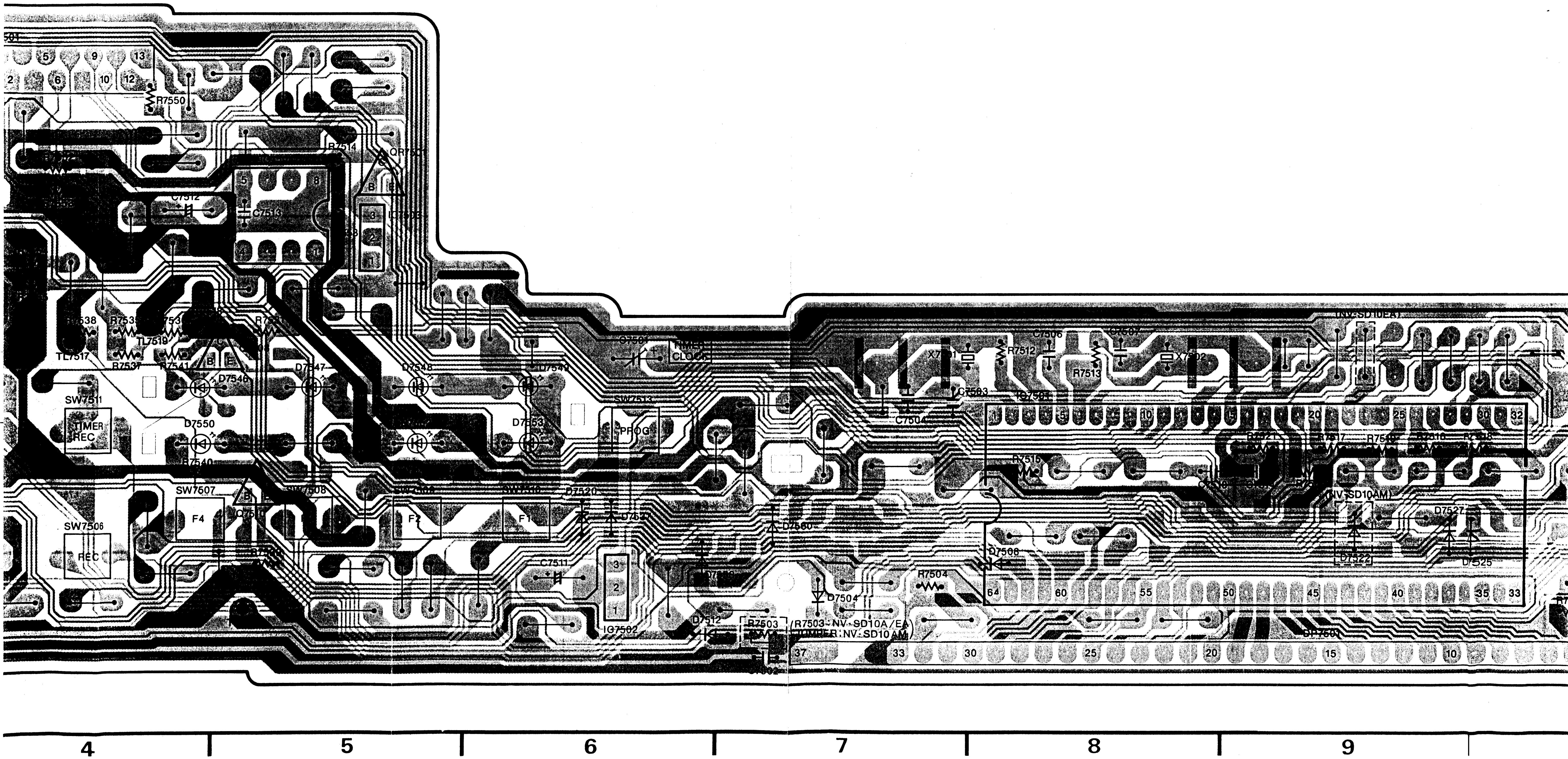
ADDRESS INFORMATION


C
B
A
1
2
3
4
5
6
7
PS704
PS703
PS702
PS701
ANT/TUNER
IF
BM
AFC
BL
AGC
BH
BT
BU
VTR
+B
C797
C708
C738
C798
C799
C706
R756
R758
R792
Q713
QR702
QR718
D771
L725
D705
L718
R782
X711
X716
X717
R726
C734
C725
R745
Q703
R728
L720
R727
C710
Q712
L711
C765
R759
L724
R783
C726
C775
C727
C740
R709
L719
T704
AFC
R741
D710
C730
C732
L764
R752
C739
QR719
QR722
R793
T703
VCO
TL704
C743
TL703
R708
TL707
C763
R767
C745
C746
TL710
C7663
C7664
IC7652
R7675
C7676
C7665
R7680
R7691
TL711
R7695
QR7601
D7602
R7696
D7601
C767
X712
QR715
QR720
R751
C755
C757
QR721
QR724
TL706
R730
R739
IC701
C723
R720
TL709
R704
R705
R721
VR701
AGC
R7674
R7671
R7673
R7672
R7678
C7670
C7671
C7677
X714
X715
R785
AUDIO LEVEL
VR751
C754
R780
R781
C756
C753
C748
C749
R746
C737
T711
SIF
R763
R716
C790
X710
R777
R775
L721
D703
D704
R776
D702
D701
C771
L714
C773
C774
R703
R701
C721
C707
F7676
TL708
C7661
C7662
R7679
C7667
R7677
C7666
C709
C705
C7678
C7673
C7702
C7675
C7679
Q771
QR713
R773
R774
D773
C701
IC702
QR716
QR717
QR723
L723
L722
C752
L751

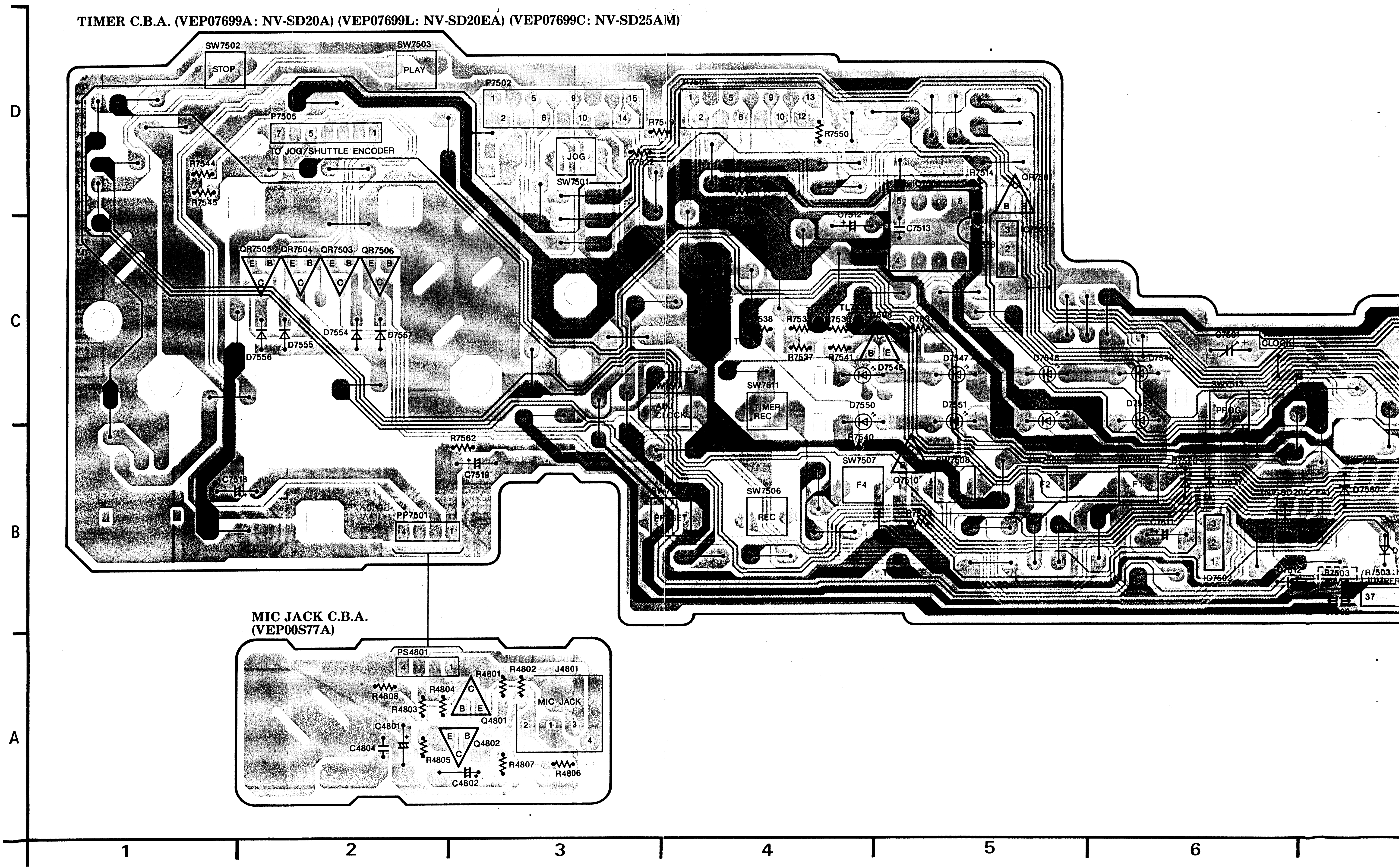
4-23. TIMER C.B.A. (VEP07701A: NV-SD10A) (VEP07701L: NV-SD10EA) (VEP07701C: NV-SD10AM)

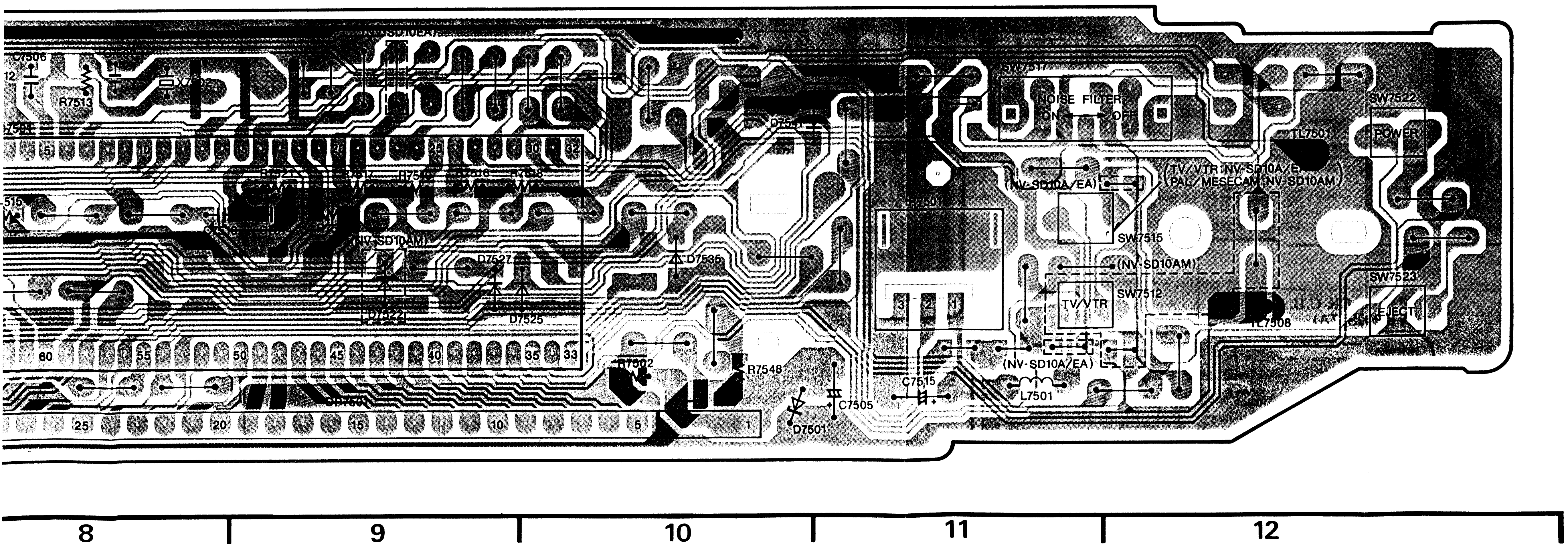

SW7502
STOP
SW7503
PLAY
P7502
P7501
P7505
TO SHUTTLE ENCODER
R7544
R7545
R7549
R7550
JOG
SW7501
R7514
QR7501
C7512
C7513
R7553
QR7505
QR7504
QR7503
QR7506
D7556
D7555
D7554
D7557
R7538
TL7517
R7537
R7541
TL7519
D7546
D7547
D7548
D7549
D7550
D7553
SW7504
ADJ CLOCK
SW7511
TIMER REC
R7540
SW7507
F4
Q7510
SW7508
SW7509
F2
SW7510
F1
D7520
SW7505
PRESET
SW7506
REC
C7511
IC7502
PROG
C
B
A
1
2
3
4
5
6

D10AM)


R7550
R7514
QR7501
C7512
C7513
C7503
R7538
R7535
TL7519
R7537
R7541
TL7517
D7546
D7547
D7548
D7549
SW7511
TIMER REC
D7550
R7540
D7553
SW7507
F4
SW7508
F2
F1
SW7506
REC
D7520
C7511
IG7502
C7501
TIMER CLOCK
SW7513
PROG
D7560
D7504
D7512
R7503
(R7503 : NV-SD10A/EA)
(JUMPER : NV-SD10AM)
C7502
X7501
R7512
C7506
C7507
R7513
X7502
C7504
IC7501
(NV-SD10EA)
R7515
R7517
R7518
R7516
D7508
R7504
(NV-SD10AM)
D7527
D7522
D7525
DP7501
4
5
6
7
8
9

4-24. TIMER C.B.A. (VEP07699A: NV-SD20A) (VEP07699L: NV-SD20EA) (VEP07699C: NV-SD25AM)


TIMER C.B.A. (VEP07699A: NV-SD20A) (VEP07699L: NV-SD20EA) (VEP07699C: NV-SD25AM)
SW7502
STOP
SW7503
PLAY
P7502
P7505
TO JOG/SHUTTLE ENCODER
P7503
R7550
R7522
JOG
SW7501
R7544
R7545
QR7505
QR7504
QR7503
QR7506
D7556
D7555
D7554
D7557
C7512
C7513
R7514
QR750
IC7502
R7538
R7537
R7541
D7546
D7547
D7548
D7549
C7501
CLOCK
SW7511
TIMER REC
D7550
D7551
D7553
SW7513
PROG
R7540
SW7507
F4
Q7510
SW7508
F2
F1
D7520
R7562
C7519
C7518
PP7501
ADJ CLOCK
PRESET
SW7506
REC
IC7502
R7503
(R7503: JUMPER)
37
(NV-SD20/EA)
D7560
MIC JACK C.B.A. (VEP00S77A)
PS4801
R4801
R4802
J4801
MIC JACK
R4808
R4804
R4803
Q4801
C4801
C4804
Q4802
R4805
C4802
R4807
R4806
A
B
C
D
1
2
3
4
5
6


C7506
R7513
X7502
(NV-SD10EA)
D7547
SW7517
NOISE FILTER
ON
OFF
TL7501
SW7522
POWER
(NV-SD10A/EA)
(TV/VTR:NV-SD10A/EA)
PAL/MESECAM:NV-SD10AM)
R7517
R7510
R7516
R7518
(NV-SD10AM)
D7527
D7535
D7522
D7525
SW7515
(NV-SD10AM)
SW7512
TV/VTR
SW7523
EJECT
TL7508
R7502
R7548
C7505
D7501
C7515
(NV-SD10A/EA)
L7501
IR7501
5
10
25
32
60
55
50
45
40
35
33
25
20
15
10
5
1
3
2
1
8
9
10
11
12

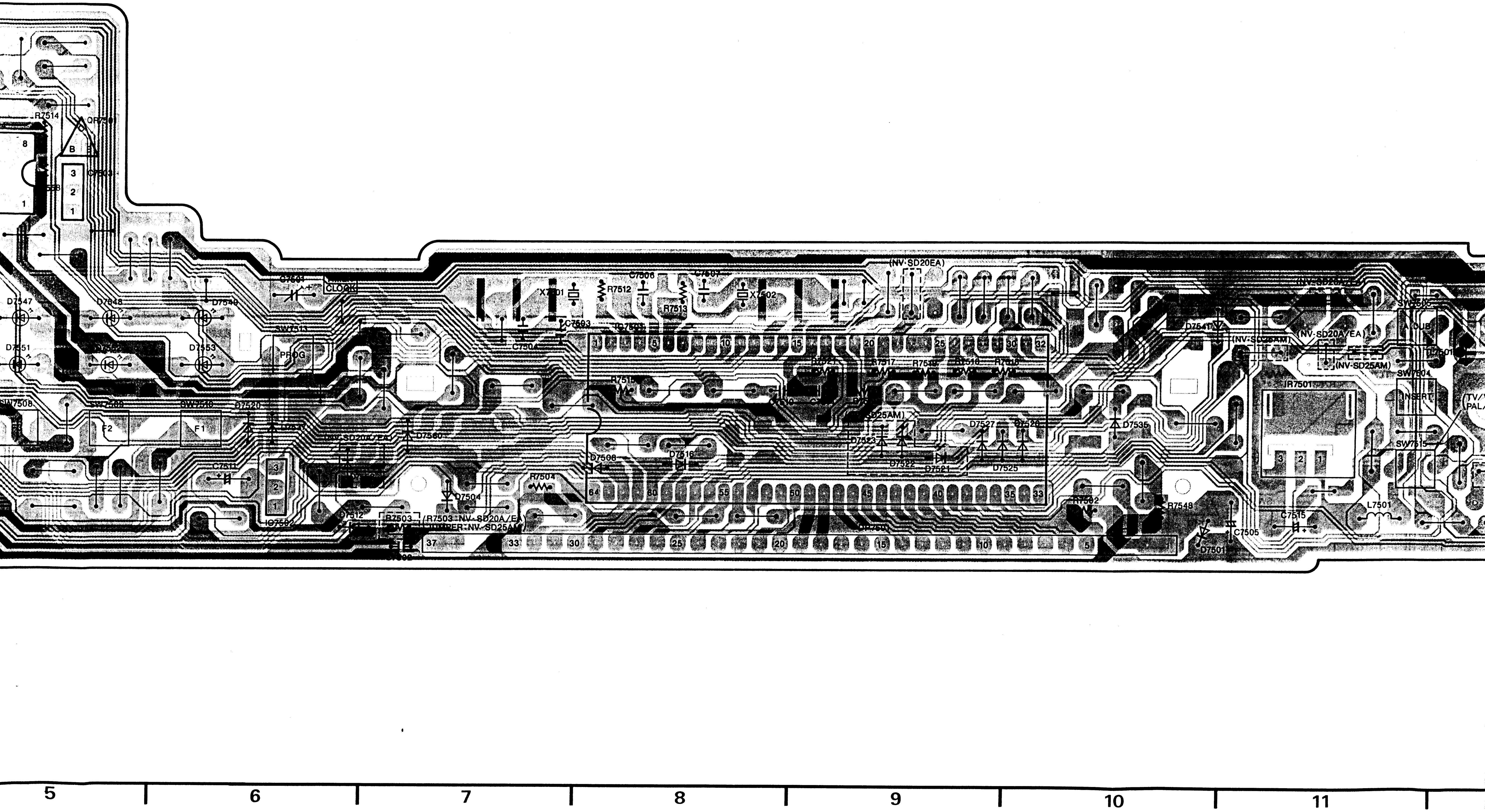
TIMER C.B.A.	
Transistor	
Q7508	B-5
Q7510	A-5
Transistor & Resistor	
QR7501	C-5
QR7503	B-2
QR7504	B-2
QR7505	B-2
QR7506	B-2
Integrated Circuit	
IC7501	B-8
IC7502	A-6
IC7503	C-5
IC7504	C-5
Test Point	
TL7501	B-12
TL7508	A-12
TL7509	A-5
TL7517	B-4
TL7518	B-4
TL7519	B-4
Adjustment	
C7501	B-6
Connector	
P7501	C-4
P7502	C-3
P7505	C-2

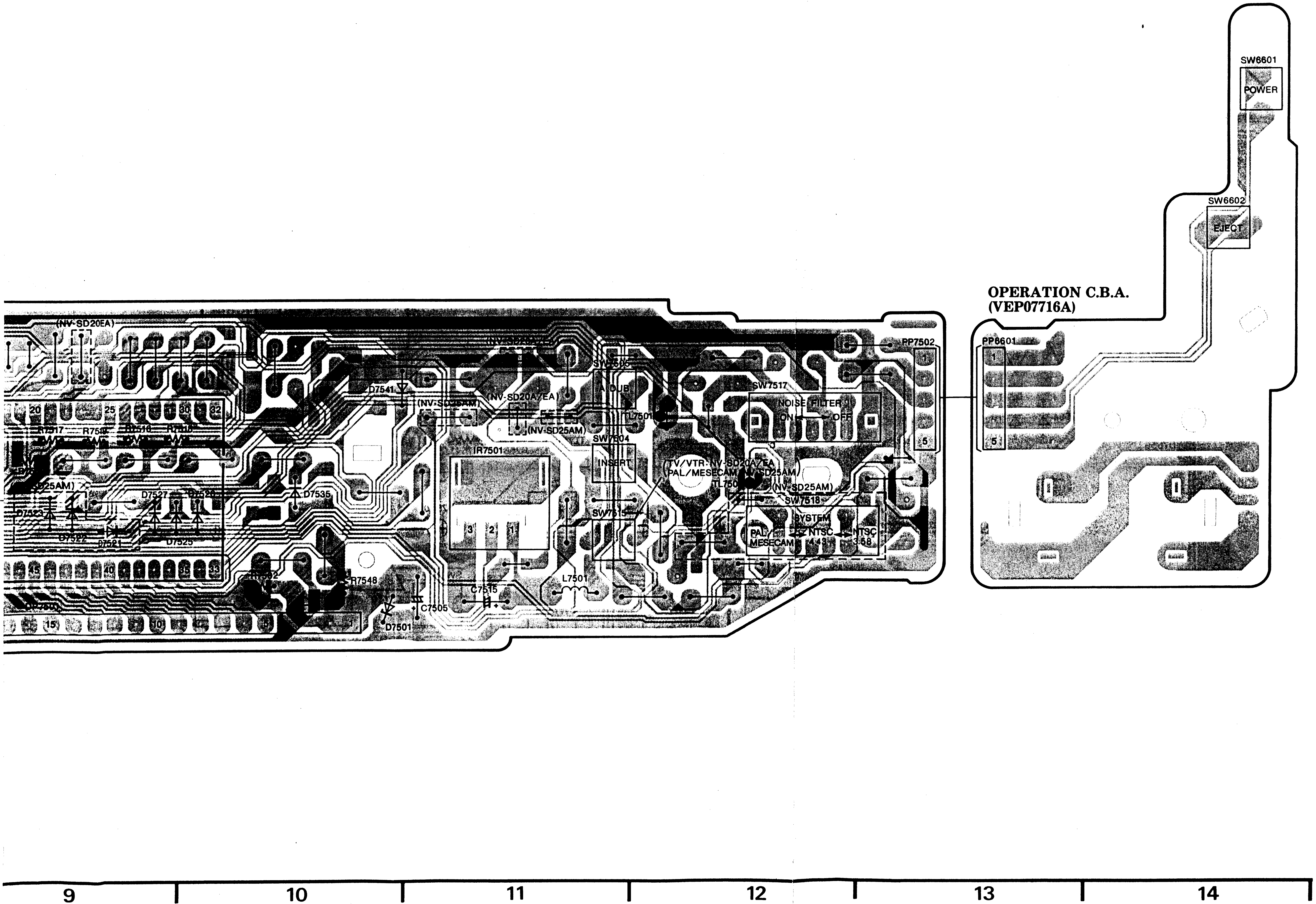
ADDRESS INFORMATION

TIMER C.B.A.
(NV-SD20, 25)

TIMER C.B.A.
(NV-SD20, 25)

TIMER C.B.A.
(NV-SD10)

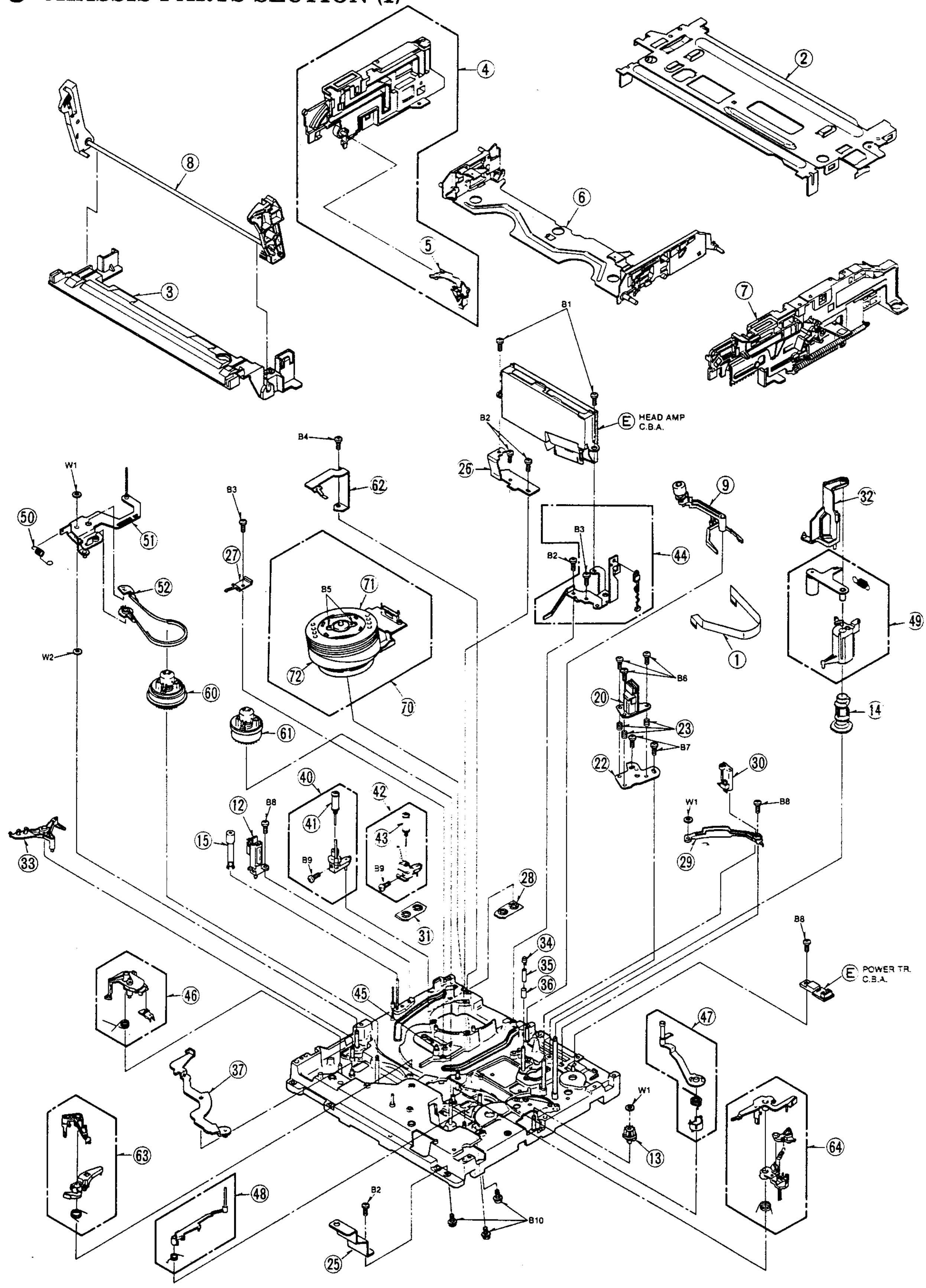

R7514
QR7501
B
E
3
2
1
8
C7503
D7547
D7548
D7549
D7551
D7553
SW7508
SW7509
SW7510
F2
F1
SW7513
PROG
C7501
CLOCK
D7520
C7511
IC7502
(NV-SD20A/EA)
D7560
D7504
R7503
(R7503: NV-SD20A/EA)
(JUMPER: NV-SD25AM)
X7501
R7512
C7506
R7513
C7507
X7502
C7503
C7504
IC7501
R7515
R7504
D7506
D7516
(NV-SD20EA)
R7517
R7516
R7518
(NV-SD25AM)
D7523
D7522
D7521
D7527
D7526
D7525
D7535
D7541
R7502
R7548
C7505
D7501
(NV-SD20A/EA)
(NV-SD25AM)
IR7501
SW7504
INSERT
SW7515
C7515
L7501
(TV/V
PAL/
1
5
10
15
20
25
30
32
33
35
40
45
50
55
60
64
37
5
6
7
8
9
10
11


OPERATION C.B.A.
(VEP07716A)
SW6601
POWER
SW6602
EJECT
PP6601
PP7502
(NV-SD20EA)
(NV-SD25AM)
(NV-SD20A/EA)
SW7505
A.DUB
SW7504
INSERT
SW7515
SW7517
NOISE FILTER
ON
OFF
TV/VTR NV-SD20A/EA
PAL/MESECAM NV-SD25AM
(NV-SD25AM)
SW7518
SYSTEM
PAL
MESECAM
NTSC 4.43
NTSC 3.58
IR7501
L7501
C7515
C7505
D7501
D7541
D7535
D7527
D7526
D7523
D7522
D7521
D7525
R7517
R7519
R7518
R7548
TL7501
TL7508
9
10
11
12
13
14

TIMER C.B.A.	
Transistor	
Q4801	A-3
Q4802	A-3
Q7508	C-5
Q7510	B-5
Transistor & Resistor	
QR7501	D-5
QR7503	C-2
QR7504	C-2
QR7505	C-2
QR7506	C-2
Integrated Circuit	
IC7501	C-8
IC7502	B-6
IC7503	C-5
IC7504	D-5
Test Point	
TL7501	C-12
TL7508	B-12
TL7509	B-5
TL7517	C-4
TL7518	C-4
TL7519	C-4
Adjustment	
C7501	C-6
Connector	
P7501	D-4
P7502	D-3
P7505	D-2
PP6601	C-13
PP7501	B-2
PP7502	C-13
PS4801	A-2

ADDRESS INFORMATION

SECTION 5
EXPLODED VIEWS & PARTS LIST
5-1. EXPLODED VIEW & MECHANICAL REPLACEMENT PARTS LIST
❶ CHASSIS PARTS SECTION (1)


④
②
⑧
⑥
⑤
③
⑦
B1
Ⓔ HEAD AMP C.B.A.
B2
B4
㉖
W1
B3
(62)
⑨
㉜
㊿
(51)
㉗
(71)
B3
B2
㊹
(52)
B5
①
㊾
W2
(60)
(72)
(70)
B6
⑳
⑭
(61)
㉓
B7
㉒
㊵
㉚
⑫
B8
㊷
W1
B8
㊶
⑮
㊸
B9
B9
㉝
㉙
㉘
㉛
B8
㉞
㉟
㊱
Ⓔ POWER TR. C.B.A.
㊻
㊺
㊼
㊲
W1
⑬
(63)
(64)
㊽
B2
B10
㉕

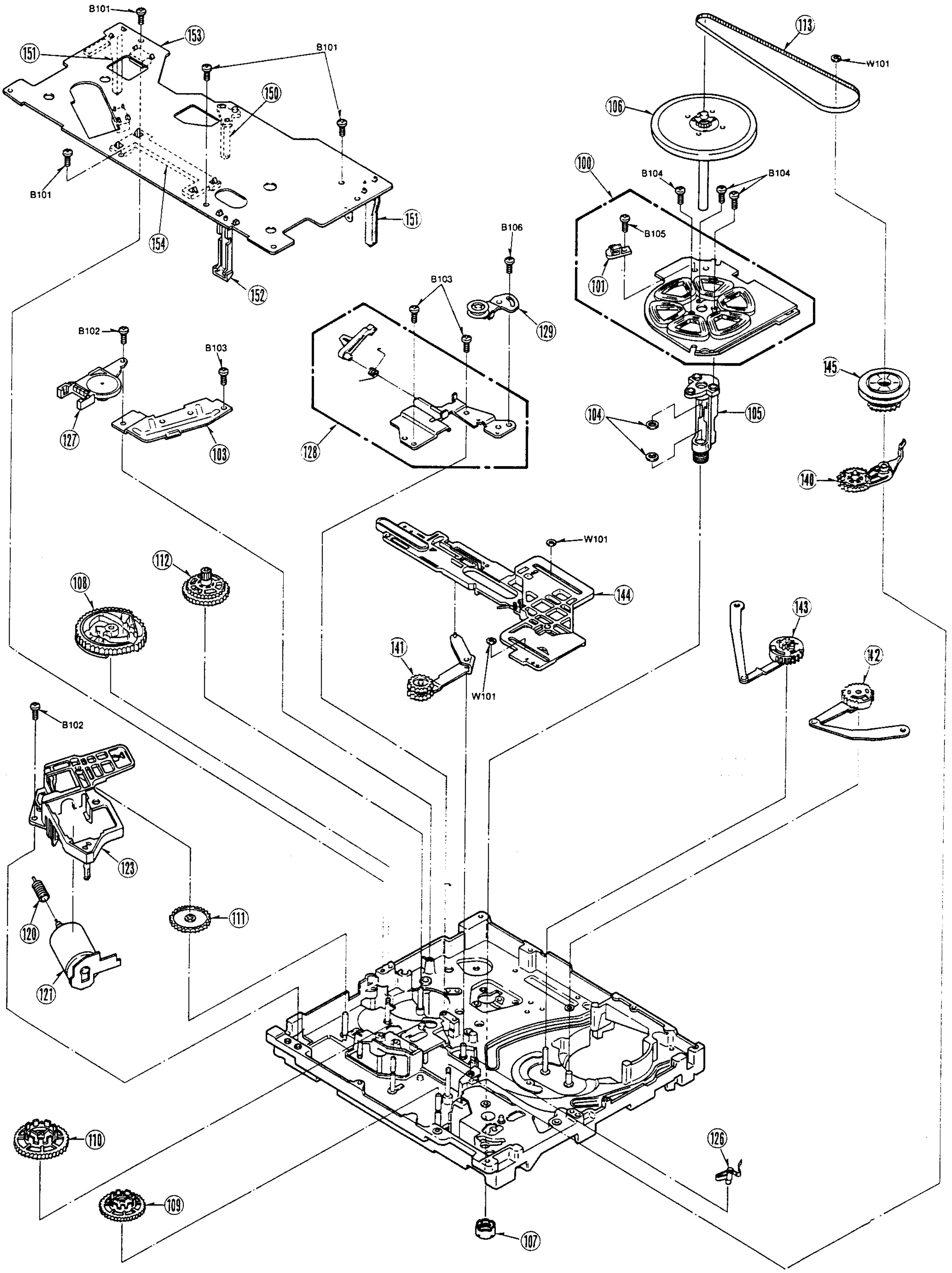
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
1(1)		VWJ0653	FLEXIBLE CABLE (6P)	1	P6003-A/C HEAD
2(1)		VMA8644	TOP PLATE	1	
3(1)		VMA8787	CASSETTE GUIDE	1	
4(1)		VXA4660	SIDE PLATE (L) UNIT	1	
5(1)		VXL2250	OPENER LEVER UNIT	1	
6(1)		VXA4661	CASSETTE HOLDER PLATE UNIT	1	
7(1)		VXA4806	SIDE PLATE (R) UNIT	1	
8(1)		VXP1339	MAIN SHAFT UNIT	1	
9(1)		VXL2251	CLEANER ARM UNIT	1	
12(1)		VBS0050	FE HEAD	1	
13(1)		VDG0871	CARRIAGE CONNECTION GEAR	1	
14(1)		VDG0886	PINCH CAM GEAR	1	
15(1)		VXP1402	IMPEDANCE ROLLER UNIT	1	
20(1)		VED0182	A/C HEAD (1) UNIT	1	
22(1)		VMA8624	A/C HEAD BASE	1	
23(1)		VMB2515	A/C HEAD SPRING	3	
25(1)		VMA8761	MOUNT ANGLE	1	
26(1)		VMA8763	HEAD AMP MOUNT ANGLE (L)	1	
27(1)		VMC0917	EARTH SPRING	1	
28(1)		VMD1937	INCLIND BASE HOLDER (S)	1	
29(1)		VMD2078	P5 STOPPER BASE	1	
30(1)		VXA4927	P5 POST STOPPER	1	
31(1)		VMD1959	INCLIND BASE HOLDER (T)	1	
32(1)		VMD1960	OPENER PIECE	1	
33(1)		VML2776	TENSION SPRING ARM	1	
34(1)		VMX1544	P4 UPPER LIMITER	1	
35(1)		VMX2175	P4 SLEEVE	1	
36(1)		VMX2176	P4 LOWER LIMITER	1	
37(1)		VML2772	TENSION RELEASE ARM	1	
40(1)		VXA4801	INCLIND BASE (S) UNIT	1	
41(1)		VXP1363A	ROLLER POST (S)	1	
42(1)		VXA4803	INCLIND BASE (T) UNIT	1	
43(1)		VXP1363	ROLLER POST (T)	1	
44(1)		VXA4869	HEAD AMP MOUNT ANGLE (R) U.	1	
45(1)		VMS2558	CASSETTE POSITION FIXTURE	1	
46(1)		VXL2310	REVIEW ARM UNIT	1	
47(1)		VXL2306	P5 ARM UNIT	1	
48(1)		VXL2243	TAKE UP TENSION REGULATOR ARM UNIT	1	
49(1)		VXL2246	PINCH ARM UNIT	1	
50(1)		VMB2434	TENSION SPRING	1	
51(1)		VXL2309	TENSION ARM (1) UNIT	1	
52(1)		VXZ0310	TENSION BAND UNIT	1	
60(1)		VXR0221	SUPPLY REEL TABLE UNIT	1	
61(1)		VXR0222	TAKE UP REEL TABLE UNIT	1	
62(1)		VXS0114	EARTH PLATE	1	
63(1)		VXZ0312	SUPPLY BRAKE ARM UNIT	1	
64(1)		VXZ0313	TAKE UP BRAKE ARM UNIT	1	
70(1)		VEG1023	CYLINDER UNIT	1	NV-SD20A/EA,SD25AM
70(1)		VEG1024	CYLINDER UNIT	1	NV-SD10A/EA/AM
71(1)		VEH0598	UPPER CYLINDER UNIT	1	NV-SD20A/EA,SD25AM
71(1)		VEH0599	UPPER CYLINDER UNIT	1	NV-SD10A/EA/AM
72(1)		VJR0082	RT TERMINAL	1	
B1		VHD0773	SCREW	2	
B2		XTV26+6F	SCREW	4	
B3		XTV26+4F	SCREW	2	
B4		XTN3+6FFZ	SCREW	1	
B5		VHD0425	SCREW	2	
B6		VHD0762	SCREW	3	
B7		XTV26+6FZ	SCREW	2	
B8		XTV26+8F	SCREW	3	
B9		VHD0760	SCREW	2	
B10		VHD0342	SCREW	3	
W1		VMX2208	WASHER	3	
W2		XWGV26D5G	WASHER	1	

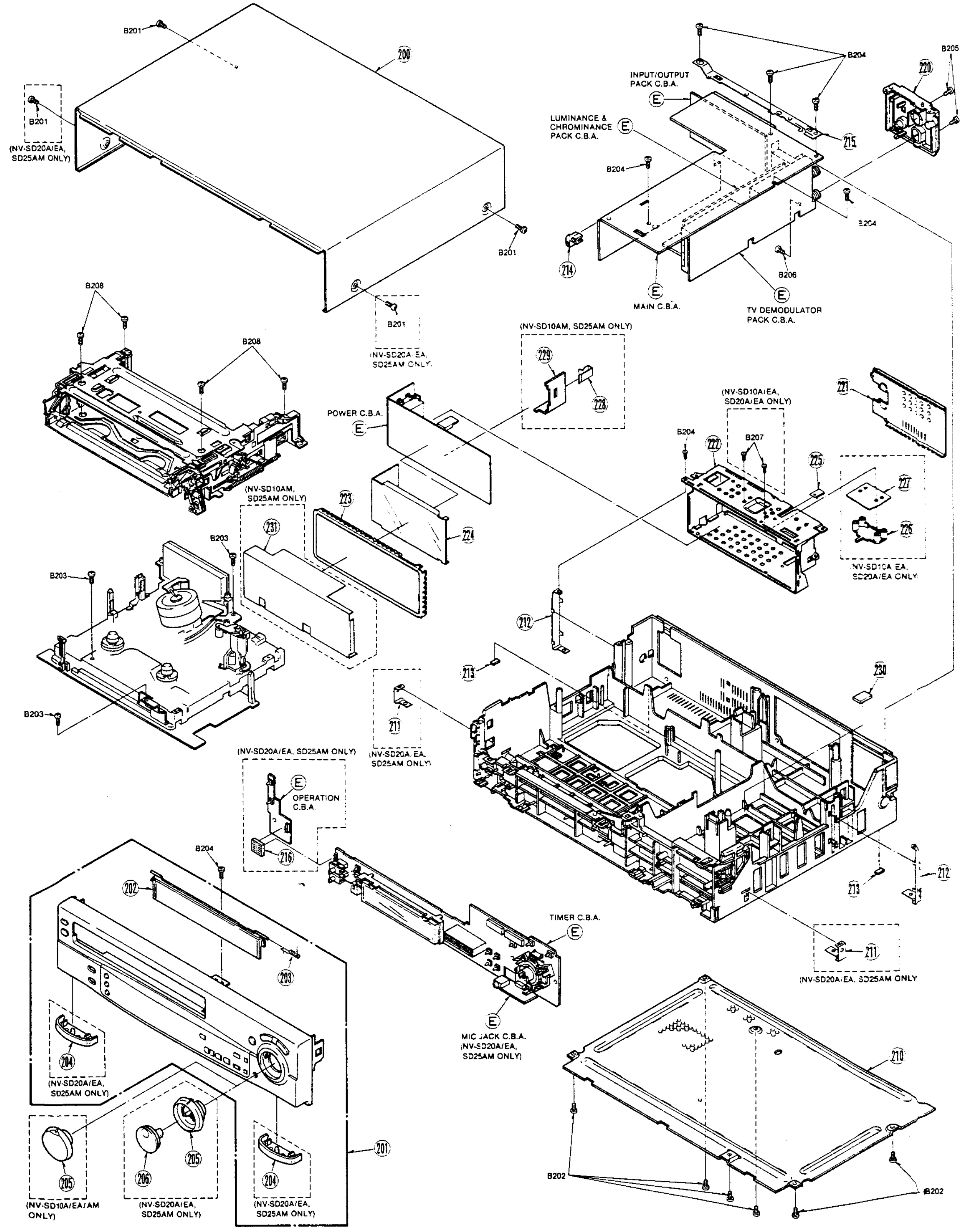
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
100(2)		VEK5927	STATOR UNIT	1	
101(2)		VBK0061	FG HEAD	1	
103(2)		VMA8765	ROTOR STOPPER	1	
104(2)		VMX1927	OIL SEAL	2	
105(2)		VXD0140	HOUSING UNIT	1	
106(2)		VXP1350	ROTOR UNIT	1	
107(2)		VXQ0297	THRUST SCREW UNIT	1	
108(2)		VDG0913	MAIN CAM GEAR	1	
109(2)		VDG0861	SUPPLY REEL GEAR	1	
110(2)		VDG0862	TAKE UP REEL GEAR	1	
111(2)		VDG0868	WORM WHEEL GEAR	1	
112(2)		VDG0885	SUB CAM GEAR	1	
113(2)		VDV0235	TIMING BELT	1	
120(2)		VDG0866	WORM GEAR	1	
121(2)		VEM0427	LOADING MOTOR (1) UNIT	1	
123(2)		VMD1942	MOTOR BRACKET	1	
126(2)		VML2725	IDLER CONTROL LEVER	1	
127(2)		VSS0365	MODE SW	1	
128(2)		VXA4797	SS BRAKE BASE UNIT	1	
129(2)		VXA4799	TENSION ROLLER UNIT	1	
140(2)		VXL2229	IDLER ARM UNIT	1	
141(2)		VXL2230	DIRECT LEVER UNIT	1	
142(2)		VXL2299	SUPPLY LOADING ARM UNIT	1	
143(2)		VXL2300	TAKE UP LOADING ARM UNIT	1	
144(2)		VXL2307	MAIN LEVER UNIT	1	
145(2)		VXP1409	CENTRE CLUTCH	1	
150(2)		VMD1926	LED HOLDER	1	
151(2)		VMD1927	PHOTO TRANSISTOR HOLDER	2	
152(2)		VES0695	SAFETY TAB SW	1	
153(2)		VJB00S63	MECHANISM CONNECTION C.B.	1	ELECTRICAL PARTS ON THE C.B.A. IS LISTED ON ELECTRICAL PARTS LIST.
154(2)		VMD2029	REEL SHAFT GUIDE	1	
B101		VHD0772	SCREW	4	
B102		XTV26+8F	SCREW	2	
B103		XTV26+6F	SCREW	3	
B104		VHD0753	SCREW	3	
B105		VHD0754	SCREW	1	
B106		XSB26+4FZ	SCREW	1	
B204		VHD0773	SCREW	7	
W101		VMX2208	WASHER	3	

❷ CHASSIS PARTS SECTION (2)


B101
(153)
(151)
B101
(150)
B101
B101
(154)
(151)
(152)
(113)
W101
(106)
(100)
B104
B104
B105
(101)
B106
B103
(129)
(128)
B102
B103
(127)
(103)
(104)
(105)
(145)
(140)
W101
(144)
(112)
(108)
(141)
W101
(143)
(142)
B102
(123)
(120)
(111)
(121)
(110)
(109)
(126)
(107)

③ CASING PARTS SECTION


B201
200
B201
(NV-SD20A/EA, SD25AM ONLY)
B201
B201
(NV-SD20A/EA, SD25AM ONLY)
B204
B205
220
INPUT/OUTPUT PACK C.B.A.
E
LUMINANCE & CHROMINANCE PACK C.B.A.
E
215
B204
B204
214
B206
E
MAIN C.B.A.
E
TV DEMODULATOR PACK C.B.A.
B208
B208
(NV-SD10AM, SD25AM ONLY)
229
228
POWER C.B.A.
E
221
(NV-SD10A/EA, SD20A/EA ONLY)
B204
B207
222
225
227
226
(NV-SD10A/EA, SD20A/EA ONLY)
(NV-SD10AM, SD25AM ONLY)
223
231
224
B203
B203
B203
212
213
230
211
(NV-SD20A/EA, SD25AM ONLY)
(NV-SD20A/EA, SD25AM ONLY)
E
OPERATION C.B.A.
216
B204
202
203
TIMER C.B.A.
E
212
213
211
(NV-SD20A/EA, SD25AM ONLY)
E
MIC JACK C.B.A. (NV-SD20A/EA, SD25AM ONLY)
204
(NV-SD20A/EA, SD25AM ONLY)
210
201
205
(NV-SD10A/EA/AM ONLY)
206
205
(NV-SD20A/EA, SD25AM ONLY)
204
(NV-SD20A/EA, SD25AM ONLY)
B202
B202

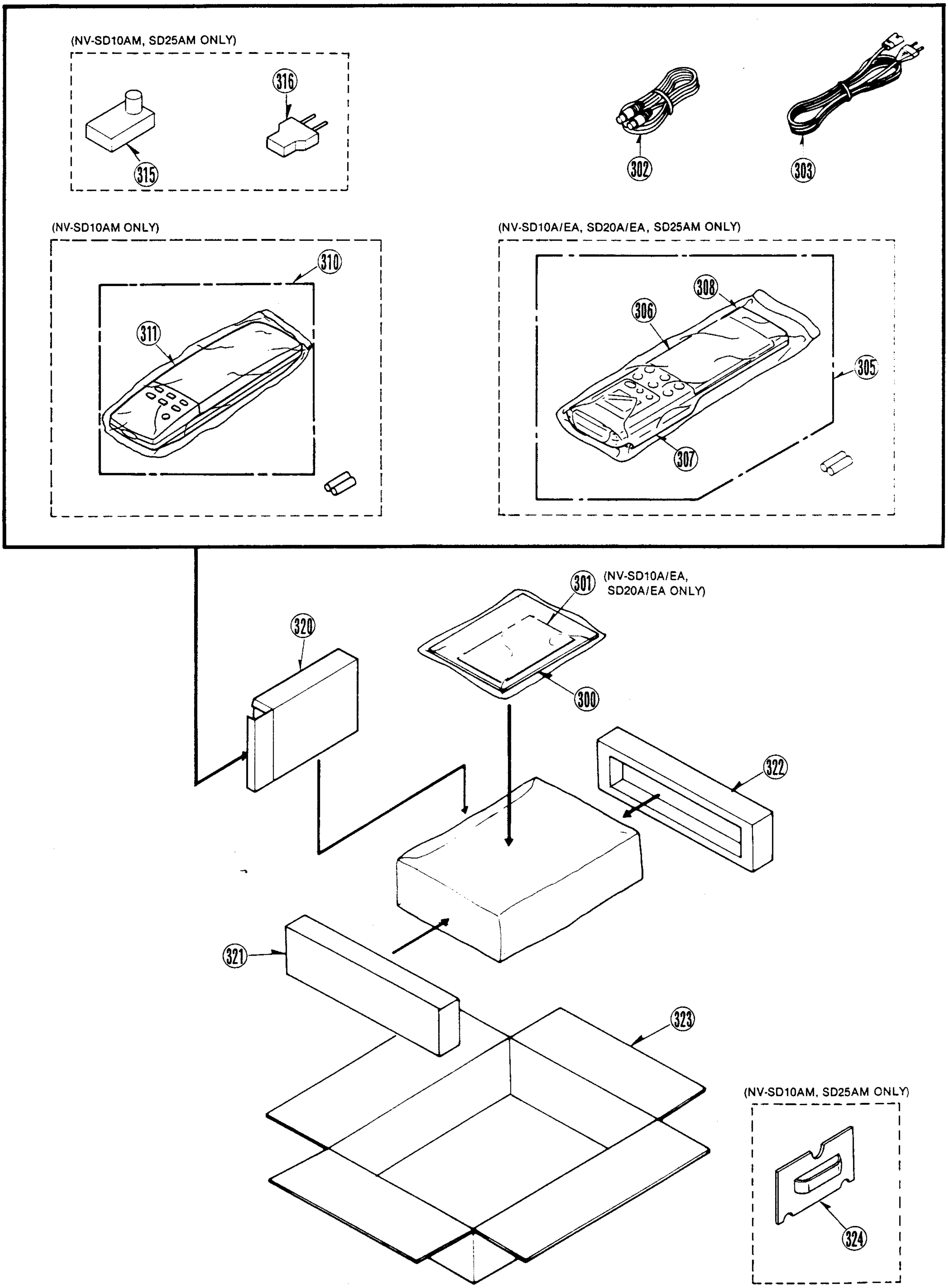
Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
200(3)		VGM0974	TOP PANEL	1	NV-SD10A/EA/AM
200(3)		VGM0988	TOP PANEL	1	NV-SD20A/EA,SD25AM
201(3)		VYP5176	FRONT PANEL UNIT	1	NV-SD10A/EA
201(3)		VYP5177	FRONT PANEL UNIT	1	NV-SD10AM
201(3)		VYP5175	FRONT PANEL UNIT	1	NV-SD20A/EA
201(3)		VYP5158	FRONT PANEL UNIT	1	NV-SD25AM
202(3)		VKF1978	BLINDER PANEL	1	
203(3)		VMB2521	BLINDER SPRING	1	
204(3)		VKA0153	LEG	2	NV-SD20A/EA,SD25AM
205(3)		VGU6129	SHUTTLE KNOB	1	NV-SD10A/EA/AM
205(3)		VGU6124	SHUTTLE KNOB	1	NV-SD20A/EA,SD25AM
206(3)		VXU1139	JOG NOB UNIT	1	NV-SD20A/EA,SD25AM
210(3)		VKU0379	BOTTOM PLATE	1	
211(3)		VMP3821	SIDE ANGLE (F)	2	NV-SD20A/EA,SD25AM
212(3)		VMP3940	SIDE ANGLE (R)	2	
213(3)		VKA0122	FOOT	2	
214(3)		VJF0374	MAIN C.B.A. HOLDER	1	
215(3)		VMP3939	EARTH ANGLE	1	
216(3)		VJS3084A005	BRIDGE CONNECTOR	1	NV-SD20A/EA,SD25AM
220(3)		VJH0690	RF ANT TERMINAL PLATE	1	NV-SD10A/EA/AM,SD20A
220(3)		VJH0682	RF ANT TERMINAL PLATE	1	NV-SD25AM
221(3)		VSC3110	POWER SHIELD COVER (TOP)	1	
222(3)		VXA4925	POWER SHIELD COVER (MAIN) U	1	
223(3)		VSC3375	POWER SHIELD COVER (BOTTOM)	1	
224(3)		VMZ1854	POWER BARRIER	1	NV-SD10A/EA,SD20A/EA
224(3)		VMZ2106	POWER BARRIER	1	NV-SD10AM,SD25AM
225(3)		VMC0357	TR. HOLDER SPRING	1	
226(3)		VGQ1377	TR. HOLDER	1	NV-SD10A/EA,SD20A/EA
227(3)		VMZ1224	INSULATION SHEET	1	NV-SD10A/EA,SD20A/EA
228(3)		VMC0811	IC HOLDER SPRING	1	NV-SD10AM,SD25AM
229(3)		VSC3778	HEAT SINK	1	NV-SD10AM,SD25AM
230(3)		VGQ0727	SPACER	1	
231(3)		VMZ2123	BARRIER	1	NV-SD10AM,SD25AM
B201		XTW3+10TFZ	SCREW	2	NV-SD10A/EA/AM
B201		XTW3+10TFZ	SCREW	4	NV-SD20A/EA,SD25AM
B202		VHD0059	SCREW	6	
B203		VHD0168	SCREW	3	
B204		VHD0773	SCREW	7	
B205		XTV3+12JFZ	SCREW	2	
B206		XTV3+6F	SCREW	1	
B207		XTV3+8G	SCREW	2	NV-SD10A/EA,SD20A/EA
B208		XTV26+8FR	SCREW	4	

Note:1.* Be sure to make your orders of replacement parts according to this list.
2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
300(4)		VQT5135	OPERATING INSTRUCTIONS	1	<!>NV-SD10A/EA
			(ENGLISH)		
300(4)		VQT5134	OPERATING INSTRUCTIONS	1	<!>NV-SD10AM
			(ENGLISH/ARABIC)		
300(4)		VQT5137	OPERATING INSTRUCTIONS	1	<!>NV-SD20A/EA
			(ENGLISH)		
300(4)		VQT5136	OPERATING INSTRUCTIONS	1	<!>NV-SD25AM
			(ENGLISH/ARABIC/RUSSIAN)		
301(4)		VQC1839	PROGRAMME SHEET	1	NV-SD10A/EA,SD20A/EA
302(4)		VJA0376	DIN RF CABLE	1	
303(4)		VJA0684	AC CORD	1	<!>NV-SD10A/EA,SD20A
303(4)		VJA0713	AC CORD	1	<!>NV-SD10AM,SD25AM
305(4)		VEQ1466	REMOTE CONTROLLER	1	NV-SD10A/EA,SD20A/EA
			(BUILD IN DIGITAL SCANNER)		
305(4)		VEQ1467	REMOTE CONTROLLER	1	NV-SD25AM
306(4)		VGP3344	DOOR PANEL	1	NV-SD10A/EA,SD20A/EA
					NV-SD25AM
307(4)		VKF1977	BATTERY COVER	1	NV-SD10A/EA,SD20A/EA
					NV-SD25AM
308(4)		VGQ3046	CAP	1	NV-SD10A/EA,SD20A/EA
308(4)		VGQ3047	CAP	1	NV-SD25AM
310(4)		EUR57507	REMOTE CONTROLLER	1	NV-SD10AM
311(4)		UR57FT415	SLIDE DOOR PANEL	1	NV-SD10AM
315(4)		VJP2974	AC PLUG ADAPTOR	1	NV-SD10AM,SD25AM
316(4)		VSQ0662	SEPARATION ADAPTOR	1	NV-SD10AM,SD25AM
317(4)		VPK1533	ACCESSORIES PACKING	1	NV-SD10AM,SD25AM
320(4)		VPK0825	ACCESSORIES PACKING	1	NV-SD10A/EA,SD20A/EA
321(4)		VPN3542	CUSHION (L)	1	
322(4)		VPN3543	CUSHION (R)	1	
323(4)		VPG6714	PACKING	1	NV-SD10A
323(4)		VPG6715	PACKING	1	NV-SD10EA
323(4)		VPG6716	PACKING	1	NV-SD10AM
323(4)		VPG6717	PACKING	1	NV-SD20A
323(4)		VPG6718	PACKING	1	NV-SD20EA
323(4)		VPG6719	PACKING	1	NV-SD25AM
324(4)		VPQ0001	HANDLE	1	NV-SD10AM,SD25AM
			SERVICE FIXTURES & TOOLS		
		VFJ8125H3F	VHS ALIGNMENT TAPE(PAL)	1	
		VFK0335	RETAINING RING REMOVER	1	
			(3mm/4mm)		
		VFK0329	POST ADJUSTMENT SCREWDRIVER	1	
		VFK0326	HEX WRENCH SET	1	
		VFK0132	BACK TENSION METER	1	
		VFK0343	CHECK LIGHT	1	
		VFK27	HEAD CLEANING STICK	1	
		MOR265	MORLYTONE GREASE	1	
		VFK0341	UPPER CYLINDER REMOVER	1	
		VFK0680	WHITE GREASE	1	
		VFK0851	CENTRE FIXING TOOL	1	
		VFK0330	FINE ADJUSTMENT GEAR DRIVER	1	

❹ PACKING PARTS SECTION


(NV-SD10AM, SD25AM ONLY)
316
315
302
303
(NV-SD10AM ONLY)
310
311
(NV-SD10A/EA, SD20A/EA, SD25AM ONLY)
308
306
305
307
301
(NV-SD10A/EA, SD20A/EA ONLY)
320
300
322
321
323
(NV-SD10AM, SD25AM ONLY)
324

5-2. ELECTRICAL REPLACEMENT PARTS LIST

Note:1.* Be sure to make your orders of replacement parts according to this list.

2.IMPORTANT SAFETY NOTICE
Components identified with the mark <!> have the special characteristics for safety. When replacing any of these components,use only the same type.

3.Unless otherwise specified,
All resistors are in OHMS ,K=1,000 OHMS. All capacitors are in MICROFARADS(uf),P=uuF.

4.The P.C.Board units marked width'▮'show below the main assembled parts.

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP03971B	MAIN C.B.A.	1	(RTL)NV-SD10A
		VEP03971S	MAIN C.B.A.	1	(RTL)NV-SD10EA
		VEP03971D	MAIN C.B.A.	1	(RTL)NV-SD10AM
		VEP03971A	MAIN C.B.A.	1	(RTL)NV-SD20A
		VEP03971R	MAIN C.B.A.	1	(RTL)NV-SD20EA
		VEP03971C	MAIN C.B.A.	1	(RTL)NV-SD25AM
		VEP03972B	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD10A/EA/AM
		VEP03972A	INPUT/OUTPUT PACK C.B.A.	1	(RTL)NV-SD20A/EA,
					NV-SD25AM.
		VEP03975B	LUMINANCE & CHROMINANACE	1	(RTL)NV-SD10A/EA
			PACK C.B.A.		
		VEP03975D	LUMINANCE & CHROMINANACE	1	(RTL)NV-SD10AM
			PACK C.B.A.		
		VEP03975A	LUMINANCE & CHROMINANACE	1	(RTL)NV-SD20A/EA
			PACK C.B.A.		
		VEP03975C	LUMINANCE & CHROMINANACE	1	(RTL)NV-SD25AM
			PACK C.B.A.		INCLUDING THE NTSC
					REC C.B.A.
					(VEP03888C).
		VEP03888C	NTSC REC C.B.A.	1	(RTL)NV-SD25AM
					INCLUDED IN
					LUMINANCE &
					CHROMINANCE PACK
					C.B.A.(VEP03975C).
		VEP07629K	TV DEMODULATOR C.B.A.	1	(RTL)NV-SD10A,20A
		VEP07629L	TV DEMODULATOR C.B.A.	1	(RTL)NV-SD10EA/AM
					NV-SD20EA
		VEP07705A	TV DEMODULATOR C.B.A.	1	(RTL)NV-SD25AM
		VEP05180B	HEAD AMP C.B.A.	1	(RTL)NV-SD10A/EA/AM
		VEP05180A	HEAD AMP C.B.A.	1	(RTL)NV-SD20A/EA,
					NV-SD25AM.
		VEP07701A	TIMER C.B.A.	1	(RTL)NV-SD10A

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VEP07701L	TIMER C.B.A.	1	(RTL)NV-SD10EA
		VEP07701C	TIMER C.B.A.	1	(RTL)NV-SD10AM
		VEP07699A	TIMER C.B.A.	1	(RTL)NV-SD20A
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP07699L	TIMER C.B.A.	1	(RTL)NV-SD20EA
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP07699C	TIMER C.B.A.	1	(RTL)NV-SD25AM
					INCLUDING THE MIC
					C.B.A.(VEP00S77A).
		VEP00S77A	MIC C.B.A.	1	(RTL)NV-SD20A/EA,
					NV-SD25AM.
					INCLUDED IN TIMER
					C.B.A.(VEP07699L/C/A)
		VEP07716A	OPERATION C.B.A.	1	(RTL)NV-SD20A/EA,
					NV-SD25AM
		VEP01518F	POWER C.B.A.	1	(RTL)<!>NV-SD10A,20A
		VEP01518E	POWER C.B.A.	1	(RTL)<!>
					NV-SD10EA,20EA
		VEP01525A	POWER C.B.A.	1	(RTL)<!>
					NV-SD10AM,25AM
		---------	MECHANISM CONNECTION C.B.A.	1	(RTL)
					NOT SUPPLIED AS
					C.B.A..(C.B. IS
					LISTED ON MECHANICAL
					PARTS LIST)
		VEP00S86A	POEWR TRANSISTOR C.B.A.	1	(RTL)
		---------	MOTOR C.B.A.	1	(RTL)
					C.B.A. IS INCLUDED
					IN LOADING MOTOR (1)
					UNIT.(VEM0427)
		ENC17906	RF CONVERTER	1	<!>NV-SD10A,20A
		ENC17905	RF CONVERTER	1	<!>NV-SD10EA/AM,
					NV-SD20EA
		ENC17992	RF CONVERTER	1	<!>NV-SD25AM
		ENV77881H3	TUNER	1	<!>NV-SD10A,20A
		ENV77880H3	TUNER	1	<!>NV-SD10EA/AM,
					NV-SD20EA
		ENV79828H3	TUNER	1	<!>NV-SD25AM
F1101		XBA2C16TB0	FUSE	1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03971B	MAIN C.B.A.		(RTL)NV-SD1OA
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1332JZ	P.CAPACITOR 100V 4700P	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001		1SS254	DIODE	1	
D2003		1SS254	DIODE	1	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002		1SS254	DIODE	1	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRQ	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L7002		ELESQ101KA	COIL 100UH	1	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001,02		VJS3193E013A	CONNECTOR (FEMALE)	2	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2003		MSB709	TRANSISTOR	1	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q7001		MSB710-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR2007		MRN2404	TRANSISTOR-RESISTOR	1	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR7001		MRN1404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7002		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7003		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2019		EVNDXAA00B15	V.RESISTOR 100K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P6501-P1505
		VWJ0688B	FLAT CARD CABLE	1	P2501-P1507
		VWJ0691B	FLAT CARD CABLE	1	P3001-P501
		VWJ0690A	FLAT CARD CABLE	1	P1001-P1102
		VWJ131W140BB	FLAT CARD CABLE	2	P6001,2-P7501,2
		VEE8284	WIRE CABLE	1	P4002-FE HEAD
		VEE8285	WIRE CABLE	1	P2503-P202
		VEE8286	WIRE CABLE	1	P2502-P1506
	■	VEP03971S	MAIN C.B.A.		(RTL)NV-SD10EA
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3037		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1332JZ	P.CAPACITOR 100V 4700P	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001		1SS254	DIODE	1	
D2003		1SS254	DIODE	1	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002		1SS254	DIODE	1	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRQ	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L7002		ELESQ101KA	COIL 100UH	1	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001,02		VJS3193E013A	CONNECTOR (FEMALE)	2	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2003		MSB709	TRANSISTOR	1	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q7001		MSB710-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2007		MRN2404	TRANSISTOR-RESISTOR	1	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR7001		MRN1404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2001		ERJ6GMYJ333	M,RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7002		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7003		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2019		EVNDXAA00B15	V.RESISTOR 100K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P6501-P1505
		VWJ0688B	FLAT CARD CABLE	1	P2501-P1507
		VWJ0691B	FLAT CARD CABLE	1	P3001-P501
		VWJ0690A	FLAT CARD CABLE	1	P1001-P1102
		VWJ131W140BB	FLAT CARD CABLE	2	P6001,2-P7501,2
		VEE8284	WIRE CABLE	1	P4002-FE HEAD
		VEE8285	WIRE CABLE	1	P2503-P202
		VEE8286	WIRE CABLE	1	P2502-P1506

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03971D	MAIN C.B.A.		(RTL)NV-SD10AM
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1015		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1332JZ	P.CAPACITOR 100V 4700P	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA1CM22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001		1SS254	DIODE	1	
D2003		1SS254	DIODE	1	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002		1SS254	DIODE	1	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRQ	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L7002		ELESQ101KA	COIL 100UH	1	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS1658	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001,02		VJS3193E013A	CONNECTOR (FEMALE)	2	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q7001		MSB710-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2007		MRN2404	TRANSISTOR-RESISTOR	1	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001		MRN1404	TRANSISTOR-RESISTOR	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7001		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2027,28		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7002		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7003		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7004		ERJ6GMZOR00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
			TRANSFORMERS		
T4001		EIQ7QF014Q	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2019		EVNDXAA00B15	V.RESISTOR 100K	1	
VR3012		EVNDXAA00B52	V.RESISTOR 500	1	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P6501-P1505
		VWJ0688B	FLAT CARD CABLE	1	P2501-P1507
		VWJ0691B	FLAT CARD CABLE	1	P3001P501
		VWJ0690A	FLAT CARD CABLE	1	P1001-P1102
		VWJ131W140BB	FLAT CARD CABLE	2	P6001,2-P7501,2
		VEE8284	WIRE CABLE	1	P4002-FE HEAD
		VEE8285	WIRE CABLE	1	P2503-P202
		VEE8286	WIRE CABLE	1	P2502-P1506
	■	VEP03971A	MAIN C.B.A.		(RTL)NV-SD20A
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H1022FN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001-06		1SS254	DIODE	6	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRP	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3006		VLQEL05F5R6K	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L7002		ELESQ101KA	COIL 100UH	1	
L7004		ELESQ1R0KA	COIL 1UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
Q7001		MSB710-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR7001		MRN1404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7002		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7003		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P6501-P1505
		VWJ0688B	FLAT CARD CABLE	1	P2501-P1507
		VWJ0689B	FLAT CARD CABLE	1	P3001-P501
		VWJ0690A	FLAT CARD CABLE	1	P1001-P1102
		VWJ131W140BB	FLAT CARD CABLE	1	P6001-P7501
		VWJ150W140BB	FLAT CARD CABLE	1	P6002-P7502
		VEE8284	WIRE CABLE	1	P4002-FE HEAD
		VEE8285	WIRE CABLE	1	P2503-P202
		VEE8286	WIRE CABLE	1	P2502-P1506
	■	VEP03971R	MAIN C.B.A.		(RTL)NV-SD20EA
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3037		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001-06		1SS254	DIODE	6	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRP	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	
L3004		ELESQ101KA	COIL 100UH	1	
L3006		VLQEL05F5R6K	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L7002		ELESQ101KA	COIL 100UH	1	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043A006W	CONNECTOR (MALE)	1	
PP7005		VJP3043A004W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
Q7001		MSB710-R	TRANSISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR7001		MRN1404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6724		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6726		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7002		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7003		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P65C1-P1505
		VWJ0688B	FLAT CARD CABLE	1	P25C1-P1507
		VWJ0689B	FLAT CARD CABLE	1	P3001-P501
		VWJ0690A	FLAT CARD CABLE	1	P10C1-P1102
		VWJ131W140BB	FLAT CARD CABLE	1	P60C1-P7501
		VWJ150W140BB	FLAT CARD CABLE	1	P60C2-P7502
		VEE8284	WIRE CABLE	1	P40C2-FE HEAD
		VEE8285	WIRE CABLE	1	P25C3-P202
		VEE8286	WIRE CABLE	1	P25C2-P1506
	■	VEP03971C	MAIN C.B.A.		(RTL)NV-SD25AM
			CAPACITORS		
C1001		ECA1EM101	E.CAPACITOR 25V 100U	1	
C1002		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C1003		ECEA0JK330	E.CAPACITOR 6.3V 33U	1	
C1004		ECEA0JKA101	E.CAPACITOR 6.3V 100U	1	
C1015		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
C2001		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2002		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2003		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2004		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	
C2005		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C2006		ECUM1H472KBN	C.CAPACITOR CH 50V 4700P	1	
C2007		ECQV1H334JZ	P.CAPACITOR 50V 0.33U	1	
C2008		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2009,10		ECEA1HKN3R3	E.CAPACITOR 50V 3.3U	2	
C2011		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C2012		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2013		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C2014		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2015		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C2016		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2017		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2018		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C2019		ECUM1H223ZFN	C.CAPACITOR 50V 0.022U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C2020		ECUM1H392KBN	C.CAPACITOR CH 50V 3900P	1	
C2021		ECEA1HK4R7	E.CAPACITOR 50V 4.7U	1	
C2022		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2023		ECUM1H222KBN	C.CAPACITOR CH 50V 2200P	1	
C2024		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2501		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C2502		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2503-05		ECUM1H104KBM	C.CAPACITOR CH 50V 0.1U	3	
C2506		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C2507-09		ECEA1VKN4R7	E.CAPACITOR 35V 4.7U	3	
C2510		ECUM1H473ZFN	C.CAPACITOR CH 50V 0.047U	1	
C2511		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C2512		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C2514		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2515-17		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	3	
C2518-21		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	4	
C2522		ECUM1E224ZFN	C.CAPACITOR CH 25V 0.22U	1	
C2523		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2524,25		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C2526		ECA0JM221	E.CAPACITOR 6.3V 220U	1	
C2527		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C2528,29		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	2	
C2530		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C2531		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2532,33		ECUM1C105ZFN	C.CAPACITOR 16V 1U	2	
C2534,35		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	2	
C2536		ECUM1C474ZFM	C.CAPACITOR CH 16V 0.47U	1	
C2555		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C2556		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2557		ECEA0JK220	E.CAPACITOR 6.3V 22U	1	
C2558		ECUM1C105ZFM	C.CAPACITOR CH 16V 1U	1	
C2559		ECEA1AK330	E.CAPACITOR 10V 33U	1	
C3001		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C3002		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3003		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C3004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3005		ECEA1CKA470	E.CAPACITOR 16V 47U	1	
C3006		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3011		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3012		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C3013		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C3015		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C3016		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3018		ECUM1H151JCN	C.CAPACITOR CH 50V 150P	1	
C3019		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C3020		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3021		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C3022		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3023		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3026		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3027		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C3028		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3029		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3030		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3031		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C3034		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C3036		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4001		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4002		ECQB1H153JH	P.CAPACITOR 50V 0.015U	1	
C4003		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C4005		ECQB1H123JH	P.CAPACITOR 50V 0.012U	1	
C4007		ECUM1H681JCN	C.CAPACITOR 50V 680P	1	
C4008		ECEA1EK4R7	E.CAPACITOR 25V 4.7U	1	
C4009		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C4010		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C4011		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4012		ECQB1H102KZ	P.CAPACITOR 50V 1000P	1	
C4013		ECEA16M33	E.CAPACITOR 16V 33U	1	
C4014		ECQP1222JZ	P.CAPACITOR 0.0022U	1	
C4015		ECCD2H181J	C.CAPACITOR 500V 180P	1	
C4016		ECQB1H103JH	P.CAPACITOR 50V 0.01U	1	
C4017		ECQB1H472JH	P.CAPACITOR 50V 4700P	1	
C4018		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C4019		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C4020		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4021		ECQB1H333KH	P.CAPACITOR 50V 0.033U	1	
C4022		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C4023		ECEA10M22	E.CAPACITOR 10V 22U	1	
C4024		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C4025		ECEA16M10R	E.CAPACITOR 16V 10U	1	
C4026		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4027		ECQB1H822KZ	P.CAPACITOR 50V 8200P	1	
C4028		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4029		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C4030		ECUM1H102ZFN	C.CAPACITOR CH 50V 1000P	1	
C4031		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C4032		ECQB1H102JH	P.CAPACITOR 50V 1000P	1	
C4033		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C4034,35		ECUM1H101JCN	C.CAPACITOR CH 50V 100P	2	
C4036		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C6001		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6002		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C6003		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C6004		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6005		ECUM1H271JCN	C.CAPACITOR CH 50V 270P	1	
C6008		ECEA1HK3R3	E.CAPACITOR 50V 3.3U	1	
C6009		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6010		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C6501		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C6502		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C6503,04		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C6505		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C6711		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C7001		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7002		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C7701		ECA0JM471	E.CPAACITOR 6.3V 470U	1	
C7702		EECS5R5T224N	E.CAPACITOR 5.5V 0.22U	1	
			DIODES		
D1005		MA178	DIODE	1	
D2001-06		1SS254	DIODE	6	
D2501-04		1SS254	DIODE	4	
D2509		1SS254	DIODE	1	
D2511,12		1SS254	DIODE	2	
D3002		1SS254	DIODE	1	
D3005		MA151WA	DIODE	1	
D3007		1SS254	DIODE	1	
D3009,10		1SS254	DIODE	2	
D3012		1SS254	DIODE	1	
D4002,03		1SS254	DIODE	2	
D6002,03		1SS254	DIODE	2	
D6501-04		1SS254	DIODE	4	
D6711		1SS254	DIODE	1	
D6712		MA723VT	DIODE	1	
			CONNECTORS		
FE		VJS1141	CONNECTOR (FEMALE)	1	
			INTEGRATED CIRCUITS		
IC2501		NA3814K	IC	1	
IC2502		BA6439P	IC	1	
IC2503		LM358PS	IC	1	
IC4001		XRA7766AS	IC	1	
IC6001		MN67434VRRP	IC	1	
IC6501		BA6219B	IC	1	
IC6502		LM358PS	IC	1	
IC6710		M66006FP	IC	1	
			COILS		
L2001		ELESQ101KA	COIL 100UH	1	
L2501		ELESQ101KA	COIL 100UH	1	
L3001		ELESQ680KA	COIL 68UH	1	
L3002		ELESQ101KA	COIL 100UH	1	
L3003		ELESQ120KA	COIL 12UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L3004		ELESQ101KA	COIL 100UH	1	
L3006		VLQEL05F5R6K	COIL 5.6UH	1	
L3007		ELESQ6R8JA	COIL 6.8UH	1	
L3008		ELESQ101KA	COIL 100UH	1	
L4001		VLQEL07F153J	COIL 15MH	1	
L4002		ELESQ471KA	COIL 470UH	1	
L4003		ELESQ101KA	COIL 100UH	1	
L4004		VLQ0123	COIL	1	
L6001		VLP0074	COIL	1	
L6501		VLP0074	COIL	1	
L7002,03		ELESQ101KA	COIL 100UH	2	
L7004		ELESQ1R0KA	COIL 1UH	1	
			CONNECTORS		
P202		VJS1237T	CONNECTOR (FEMALE)	1	
P1001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P1506		VJS1736T	CONNECTOR (FEMALE)	1	
P2501		VJS3193E015A	CONNECTOR (FEMALE)	1	
P2502		VJP1230T	CONNECTOR (MALE) 3P	1	
P2502		VJS1736T	CONNECTOR (FEMALE)	1	
P2503		VJP1237T	CONNECTOR (MALE) 10P	1	
P2503		VJS1237T	CONNECTOR (FEMALE)	1	
P3001		VJS3193E014A	CONNECTOR (FEMALE)	1	
P4002		VJP1230T	CONNECTOR (MALE) 3P	1	
P4002		VJS1230T	CONNECTOR (FEMALE)	1	
P4003		VJS2331	CONNECTOR (FEMALE)	1	
P6001		VJS3193E013A	CONNECTOR (FEMALE)	1	
P6002		VJS3193E015A	CONNECTOR (FEMALE)	1	
P6003		VJP1242T	CONNECTOR (MALE) 2P	1	
P6501		VJS3193E013A	CONNECTOR (FEMALE)	1	
PP3001		VJP3044G009W	CONNECTOR (MALE)	1	
PP3002		VJP3044G012W	CONNECTOR (MALE)	1	
PP3003		VJP3044G006W	CONNECTOR (MALE)	1	
PP3004		VJP3043G011W	CONNECTOR (MALE)	1	
PP3005		VJP3043G009W	CONNECTOR (MALE)	1	
PP7001-03		VJP3043A005W	CONNECTOR (MALE)	3	
PP7004		VJP3043G007W	CONNECTOR (MALE)	1	
PP7005		VJP3043A006W	CONNECTOR (MALE)	1	
			TRANSISTORS		
Q2001		MSD601	TRANSISTOR-RESISTOR	1	
Q2002,03		MSB709	TRANSISTOR	2	
Q2004		MSD601	TRANSISTOR-RESISTOR	1	
Q2502		2SB1321-R	TRANSISTOR	1	
Q2504		MSB709	TRANSISTOR	1	
Q2505		MSD601	TRANSISTOR-RESISTOR	1	
Q2506		2SD1991	TRANSISTOR	1	
Q2507		2SD1991A	TRANSISTOR	1	
Q3001		MSB709-R	TRANSISTOR	1	
Q3002		MSD601-R	TRANSISTOR	1	
Q3003		MSC2295-B	TRANSISTOR	1	
Q3005		MSC2295	TRANSISTOR	1	
Q3006		MSB710	TRANSISTOR	1	
Q3007		MSB710-R	TRANSISTOR	1	
Q4001		MSD602-R	TRANSISTOR	1	
Q4002		2SB1378-R	TRANSISTOR	1	
Q4004		2SD1991	TRANSISTOR	1	
Q4005		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR1001		MRN1402	TRANSISTOR-RESISTOR	1	
QR2001		UN2116	TRANSISTOR-RESISTOR	1	
QR2002		XN1213	TRANSISTOR-TRANSISTOR	1	
QR2006,07		MRN2404	TRANSISTOR-RESISTOR	2	
QR2008		UN2210	TRANSISTOR-RESISTOR	1	
QR2009		MRN2404	TRANSISTOR-RESISTOR	1	
QR2010		UN2210	TRANSISTOR-RESISTOR	1	
QR2013		MRN2404	TRANSISTOR-RESISTOR	1	
QR3001		MRN1403	TRANSISTOR-RESISTOR	1	
QR3005		MRN2402	TRANSISTOR-RESISTOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
QR3007,08		DTC363EK	COMBI.TR-R	2	
QR3009		MRN1404	TRANSISTOR-RESISTOR	1	
QR3010		XN1213	TRANSISTOR-TRANSISTOR	1	
QR4001,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR4004		DTC363EK	COMBI.TR-R	1	
QR4005		MRN2404	TRANSISTOR-RESISTOR	1	
QR6005		MRN1404	TRANSISTOR-RESISTOR	1	
QR6501		XN1211	DIGITAL TRANSISTOR	1	
QR6502		UN2216	TRANSISTOR-RESISTOR	1	
QR6710		MRN2404	TRANSISTOR-RESISTOR	1	
QR7701		MRN1402	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R2001		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2003		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2004		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R2005		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2008		ERJ6GMYJ244	M.RESISTOR CH 1/10W 240K	1	
R2009,10		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2011		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2012		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2013		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R2014		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2015,16		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2018		ERJ6GMYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R2019,20		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2021		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2024		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2025		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R2026		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R2029		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2034		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2035		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R2036		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2037		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R2038		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2039		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2040		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R2501		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R2502		ERDS2FJ1R5	C.RESISTOR 1/4W 1.5	1	
R2503-05		ERDS2TJ150	C.RESISTOR 1/4W 15	3	
R2506		ERDS2FJ1R2	C.RESISTOR 1/4W 1.2	1	
R2507		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2508		EROS2CKG6800	M.RESISTOR 1/4W 680	1	
R2509		ERX12SJR47	M.RESISTOR CH 1/2W 0.47	1	
R2510-12		ERDS2TJ560	C.RESISTOR 1/4W 56	3	
R2513		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R2514		ERDS1TJ561	C.RESISTOR 1/2W 560	1	
R2515		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R2516		ERJ6GMYG432	M.RESISTOR CH 1/10W 4.3K	1	
R2517		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R2518		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R2519		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R2520		ERJ6GMYJ684	M.RESISTOR CH 1/10W 680K	1	
R2521		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R2522		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2523		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2524,25		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	2	
R2526		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R2527		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R2538,39		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	2	
R2542,43		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	2	
R2544		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R2545		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R2546		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R2551		ERJ6GMYG821	M.RESISTOR CH 1/10W 820	1	
R2554		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R2555,56		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R2557		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2558		ERJ6GMYG201	M.RESISTOR 1/10W 200	1	
R2560		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R2561,62		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	2	
R2568		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R3001		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3002		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3003		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R3006		ERJ6GMYJ750	M.RESISTOR CH 1/10W 75	1	
R3007		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3008		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R3009		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3013		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R3014		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3015		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3016		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3018		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R3025		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3026		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R3027		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3028		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R3029		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3030		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R3031		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R3032		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R3035,36		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R3037		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3038		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3040		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R3041		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R4001		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R4003		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R4004		ERJ6GMYG221	M.RESISTOR 1/10W 220	1	
R4005		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R4006		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4007		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R4008		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	1	
R4010,11		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	2	
R4012		ERJ6GMYG223	M.RESISTOR CH 1/10W 22K	1	
R4013		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4014		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R4015		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4016		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4017		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R4019		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	1	
R4023		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R4024		ERJ6GMYJ273	M.RESISTOR CH 1/10W 27K	1	
R4025		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R4027		ERJ6GMYJ394	M.RESISTOR CH 1/10W 390K	1	
R4028		ERJ6GMYG822	M.RESISTOR CH 1/10W 8.2K	1	
R4029		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4030		ERJ6GMYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R4031		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R4032		ERJ6GMYG912	M.RESISTOR CH 1/10W 9.1K	1	
R4033		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R4034		ERJ6GMYJ105	M.RESISTOR CH 1/10W 1M	1	
R4035		ERJ6GMYG302	M.RESISTOR CH 1/10W 3K	1	
R4036		ERJ6GMYJ223	M.RESISTOR CH 1/10W 22K	1	
R4037		ERJ6GMYG622	M.RESISTOR CH 1/10W 6.2K	1	
R4038		ERJ6GMYJ822	M.RESISTOR CH 1/10W 8.2K	1	
R4039		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R4040		ERJ6GMYG103	M.RESISTOR CH 1/10W 10K	1	
R4041,42		ERJ6GMYG104	M.RESISTOR CH 1/10W 100K	2	
R4043		ERJ6GMYG473	M.RESISTOR CH 1/10W 47K	1	
R4046		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R6002,03		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	2	
R6004		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R6005		ERJ6GMYJ183	M.RESISTOR CH 1/10W 18K	1	
R6006,07		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	2	
R6008		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6013,14		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R6015		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R6021		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R6022,23		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	2	
R6024		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R6028-30		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6031		ERJ6GMYJ683	M.RESISTOR CH 1/10W 68K	1	
R6501		ERJ6GMYG332	M.RESISTOR CH 1/10W 3.3K	1	
R6502		ERJ6GMYG102	M.RESISTOR CH 1/10W 1K	1	
R6503		ERJ6GMYG112	M.REISITOR CH 1/10W 1.1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R6504		ERX1SJ1R8	M.RESISTOR 1W 1.8	1	
R6505		ERJ6GMYJ564	M.RESISTOR CH 1/10W 560K	1	
R6506		VRE0034E512	M.RESISTOR CH 1/10W 5.1K	1	
R6507		VRE0034E472	M.RESISTOR CH 1/10W 4.7K	1	
R6508,09		VRE0034E103	M.RESISTOR CH 1/10W 10K	2	
R6510-12		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	3	
R6513-15		ERJ6GMYJ333	M.RESISTOR CH 1/10W 33K	3	
R6517		ERJ6GMYJ104	M.RESISTOR CH 1/10W 100K	1	
R6518		ERJ6GMYJ224	M.RESISTOR CH 1/10W 220K	1	
R6712		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6713		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R6714		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6715-19		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	5	
R6722		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R6724-26		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	3	
R6728		ERJ6GMYJ221	M.RESISTOR CH 1/10W 220	1	
R7004		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7005		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R7006		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7701		ERJ6GMYJ181	M.RESISTOR CH 1/10W 180	1	
R7702		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
			TRANSFORMERS		
T4001		EIQ7QF013Q	TRANSFORMER	1	
T4002		EIQ7QF012Q	I.F. TRANSFORMER	1	
			VARIABLE RESISTORS		
VR2001		EVNDXAA00B54	V.RESISTOR 50K	1	
VR2006		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2011		EVNDXAA00B15	V.RESISTOR 100K	1	
VR2018,19		EVNDXAA00B15	V.RESISTOR 100K	2	
VR3012,13		EVNDXAA00B52	V.RESISTOR 500	2	
VR4002		EVNDXAA00B25	V.RESISTOR 200K	1	
			CRYSTAL OSCILLATORS		
X6001		VSX0479	CRYSTAL OSCILLATOR	1	
X7701		VSQ0565	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VWJ0687A	FLAT CARD CABLE	1	P6501-P1505
		VWJ0688B	FLAT CARD CABLE	1	P2501-P1507
		VWJ0689B	FLAT CARD CABLE	1	P3001-P501
		VWJ0690A	FLAT CARD CABLE	1	P1001-P1102
		VWJ131W140BB	FLAT CARD CABLE	1	P6001-P7501
		VWJ150W140BB	FLAT CARD CABLE	1	P6002-P7502
		VEE8284	WIRE CABLE	1	P4002-FE HEAD
		VEE8285	WIRE CABLE	1	P2503-P202
		VEE8286	WIRE CABLE	1	P2502-P1506
	■	VEP03972B	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD10A/EA/AM
			CAPACITORS		
C3101,02		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3912		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C3913,14		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3915		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3916,17		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C3918		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3919		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
			DIODES		
D3101		1SS254	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC3101		BA7004	IC	1	
IC3902		BA7604N	IC	1	
			COILS		
L3101		ELESQ101KA	COIL 100UH	1	
L3901		ELESQ2R7KA	COIL 2.7UH	1	
L3902		ELESQ1R0KA	COIL 1UH	1	
L3905		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
PS3901		VJS3043F009W	CONNECTOR (FEMALE)	1	
PS3902		VJS3043F011W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q3101		2SC3311	TRANSISTOR	1	
			RESISTORS		
R3101		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3103,04		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3105		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3901		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3906		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3907,08		ERDS2TJ151	C.RESISTOR 1/4W 150	2	
R3911		ERJ6GEYG433	M.RESISTOR CH 1/10W 43K	1	
R3912		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3913		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3921		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3924		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
			SWITCHES		
SW3901		ESD172211	SWITCH	1	
			CRYSTAL OSCILLATORS		
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEJ1334	JACK PLATE	1	
	■	VEP03972A	INPUT/OUTPUT PACK C.B.A.		(RTL)NV-SD20A/EA, NV-SD25AM
			CAPACITORS		
C3101,02		ECEA1CK470	E.CAPACITOR 16V 47U	2	
C3103,04		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	2	
C3105		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C3912		ECUM1H471JCN	C.CAPACITOR 50V 470P	1	
C3913,14		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	2	
C3915		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C3916,17		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C3918		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C3919		ECQB1H223KZ	P.CAPACITOR 50V 0.022U	1	
C3920		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C3921		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
			DIODES		
D3101		1SS254	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC3101		BA7004	IC	1	
IC3902		BA7604N	IC	1	
IC3904		UPD4066BG	IC	1	
			COILS		
L3101		ELESQ101KA	COIL 100UH	1	
L3901		ELESQ2R7KA	COIL 2.7UH	1	
L3902		ELESQ1R0KA	COIL 1UH	1	
L3905		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
PS3901		VJS3043F009W	CONNECTOR (FEMALE)	1	
PS3902		VJS3043F011W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q3101		2SC3311	TRANSISTOR	1	
			RESISTORS		
R3101		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R3102		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R3103,04		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R3105		ERJ6GEYJ561	M.RESISTOR CH 1/10W 560	1	
R3901		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3906		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R3907,08		ERDS2TJ151	C.RESISTOR 1/4W 150	2	
R3911		ERJ6GEYG433	M.RESISTOR CH 1/10W 43K	1	
R3912		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R3913		ERDS2TJ750	C.RESISTOR 1/4W 75	1	
R3916		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3917		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3918		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
R3921		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R3923		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R3924		ERJ6GEYJ822	M.RESISTOR CH 1/10W 8.2K	1	
			SWITCHES		
SW3901		ESD172211	SWITCH	1	
			CRYSTAL OSCILLATORS		
X3101		VSX0099	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VEJ1334	JACK PLATE	1	
	■	VEP03975B	LUMINANCE & CHROMINANCE		(RTL)NV-SD10A/EA
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D302		1SS283	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
			DELAY LINES		
DL801		VLD0147	DELAY LINE	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	
L305		ELESQ121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807		VLQ0540J150	COIL 15UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR805		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R304		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP03975D	LUMINANCE & CHROMINANCE		(RTL)NV-SD10AM
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C814		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C815		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C816		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C817		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C818		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C819		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C820-25		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C826		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C827		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C828		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C829		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C830		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C831		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C832		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D302		1SS283	DIODE	1	
D303		MA151A	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
			DELAYS		
DL801		VLD0198	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
IC802		M52352FP	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L305		ELESQ121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807,08		VLQ0540J150	COIL 15UH	2	
L809		ELESQ101KA	COIL 100UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR303		MRN2404	TRANSISTOR-RESISTOR	1	
QR306		MRN1404	TRANSISTOR-RESISTOR	1	
QR805		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R304		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R816		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R817		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R818		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R819		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R823,24		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R825		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R829		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R831		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R832		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R833		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R834		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R835		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R836		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
			VARIABLE RESISTORS		
VR803		EVNCBAA0B14	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP03975A	LUMINANCE & CHROMINANCE		(RTL)NV-SD20A/EA
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C309		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C814		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C815		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C816		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C817		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C818		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C819		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C820-25		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C826		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C827		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C828		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C829		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C830		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C831		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C832		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C849		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
			DIODES		
D302		1SS283	DIODE	1	
D303		MA151A	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
D804		1SS254	DIODE	1	
			DELAYS		
DL801		VLD0198	DELAY	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
IC802		M52352FP	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	
L305		ELESQ121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807,08		VLQ0540J150	COIL 15UH	2	
L809		ELESQ101KA	COIL 100UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			CONNECTORS		
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR303		MRN2404	TRANSISTOR-RESISTOR	1	
QR306		MRN1404	TRANSISTOR-RESISTOR	1	
QR804		MRN2404	TRANSISTOR-RESISTOR	1	
QR805		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R304		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R818		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R819		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R823,24		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R825		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R829		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R831		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R832		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R833		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R834		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R835		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R836		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R850		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
			VARIABLE RESISTORS		
VR803		EVNCBAA00B14	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
	■	VEP03975C	LUMINANCE & CHROMINANCE		(RTL)NV-SD25AM
			PACK C.B.A.		
			CAPACITORS		
C305		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C306,07		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C308		ECEA1EKN4R7	E.CAPACITOR 25V 4.7U	1	
C310		ECEA1CK220	E.CAPACITOR 16V 22U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C311		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C312		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C313,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C315		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C319		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C320		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C321		ECUM1H333KBN	C.CAPACITOR CH 50V 0.033U	1	
C805		ECEA0JK221	E.CAPACITOR 6.3V 220U	1	
C806		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C807		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C808		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C809		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C812-14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C815		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C816		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C817		ECUM1H560JCN	C.CAPACITOR CH 50V 56P	1	
C818		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C819		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C820-25		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	6	
C826		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C827		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C828		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C829		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C830		ECEA1HK0R1	E.CAPACITOR 50V 0.1U	1	
C831		ECQB1H332JH	P.CAPACITOR 50V 0.27U	1	
C832		ECUM1H331JCN	C.CAPACITOR CH 50V 330P	1	
C838		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C839		ECUM1H100DCN	C.CAPACITOR CH 50V 10P	1	
C841		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C842		ECEA0JK101	E.CAPACITOR 6.3V 100U	1	
C843		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C845		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C846		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C848-50		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C8001		ECUM1C474ZFN	C.CAPACITOR 16V 0.47U	1	
C8002-04		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C8006		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8007		ECEA1AKS330	E.CAPACITOR 10V 33U	1	
C8008		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C8009		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8010-12		ECEA1AKS330	E.CAPACITOR 10V 33U	3	
C8013		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C8014		ECUM1H561KBN	C.CAPACITOR CH 50V 560P	1	
C8015		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C8019		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C8020		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
			DIODES		
D302		1SS283	DIODE	1	
D303		MA151A	DIODE	1	
D304		1SS254	DIODE	1	
D801,02		1SS254	DIODE	2	
D804		1SS254	DIODE	1	
			DELAYS		
DL801		VLD0198	DELAY	1	
			FILTERS		
FL8001		VLF0936	FILTER	1	
FL8002		ELB4L149	FILTER	1	
			INTEGRATED CIRCUITS		
IC301		VEFH29B	IC	1	
IC801		NJM2233BMA	IC	1	
IC802		M52352FP	IC	1	
IC8001		BA7049FS	IC	1	
			COILS		
L303		ELESQ220KA	COIL 22UH	1	
L304		ELESQ101KA	COIL 100UH	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
L305		ELESQ121JA	COIL 120UH	1	
L306		ELESQ390KA	COIL 39UH	1	
L803		ELESQ220KA	COIL 22UH	1	
L804		ELESQ101KA	COIL 100UH	1	
L805		ELESQ270KA	COIL 27UH	1	
L807,08		VLQ0540J150	COIL 15UH	2	
L809		ELESQ101KA	COIL 100UH	1	
L811,12		ELESQ101KA	COIL 100UH	2	
L8002		ELESQ101KA	COIL 100UH	1	
L8003		ELESQ221KA	COIL 220UH	1	
L8004		VLQ0188J470	COIL 47UH	1	
			CONNECTORS		
PP801		VJP3043A005W	CONNECTOR (MALE)	1	
PP802		VJP3043G003W	CONNECTOR (MALE)	1	
PP803		VJP3043G007W	CONNECTOR (MALE)	1	
PS301		VJS3044F009W	CONNECTOR (FEMALE)	1	
PS302		VJS3044F012W	CONNECTOR (FEMALE)	1	
PS303		VJS3044F006W	CONNECTOR (FEMALE)	1	
PS801		VJS3043B005W	CONNECTOR (FEMALE)	1	
PS802		VJS3043F003W	CONNECTOR (FEMALE)	1	
PS803		VJS3043F007W	CONNECTOR (FEMALE)	1	
			COMBINATION PARTS		
QR303		MRN2404	TRANSISTOR-RESISTOR	1	
QR306		MRN1404	TRANSISTOR-RESISTOR	1	
QR804		MRN2404	TRANSISTOR-RESISTOR	1	
QR805,06		MRN1404	TRANSISTOR-RESISTOR	2	
			RESISTORS		
R304		ERJ6GM20R00	M.RESISTOR CH 1/10W 0	1	
R307		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R308		ERJ6GMYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R310		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R312		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R315		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R316		ERJ6GMYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R318,19		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	2	
R322		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R327		ERJ6GEYK125	M.RESISTOR CH 1/10W 1.2M	1	
R813		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R814		ERJ6GMYJ393	M.RESISTOR CH 1/10W 39K	1	
R815		ERJ6GMYJ821	M.RESISTOR CH 1/10W 820	1	
R816		ERJ6GMYJ471	M.RESISTOR CH 1/10W 470	1	
R817		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R818		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R819		ERJ6GMYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R820,21		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	2	
R822		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R823,24		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	2	
R827		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R828		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R829		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R830		ERJ6GMYJ271	M.RESISTOR CH 1/10W 270	1	
R831		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R832		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R833		ERJ6GMYJ204	M.RESISTOR CH 1/10W 200K	1	
R834		ERJ6GMYJ153	M.RESISTOR CH 1/10W 15K	1	
R835		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R836		ERJ6GMYJ154	M.RESISTOR CH 1/10W 150K	1	
R848		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R849		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R850		ERJ6GMYJ563	M.RESISTOR CH 1/10W 56K	1	
R853		ERJ6GMYJ473	M.RESISTOR CH 1/10W 47K	1	
R855		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R857		ERJ6GMYJ101	M.RESISTOR 1/10W 100	1	
R858		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R859		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R8001-03		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	3	
R8004		ERJ6GEYJ821	M.RESISTOR CH 1/10W 820	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R8005		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R8007		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R8008,09		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	2	
R8010		ERJ6GEYG911	M.RESISTOR CH 1/10W 910	1	
R8011		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R8014		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470K	1	
R8015		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R8016		ERJ6GEYJ181	M.RESISTOR CH 1/10W 180	1	
			VARIABLE RESISTORS		
VR803		EVNCBAA00B14	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X801		VSX0162	CRYSTAL OSCILLATOR	1	
X8001		VSX0473	CRYSTAL OSCILLATOR	1	
	■	VEP07629K	TV DEMODULATOR C.B.A.		(RTL)NV-SD10A,20A
			CAPACITORS		
C701,02		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C705		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C706		ECUM1H1042FG	CAPACITOR CH 50V 0.1U	1	
C707		ECEA1HKSR47	E.CAPACITOR 50V 0.47U	1	
C708,09		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C721-23		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C726		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C727		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C729		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C732		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C734		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C736		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C737		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C738		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C739,40		ECEA1HKR47	E.CAPACITOR 50V 0.47U	2	
C743		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C745		ECUM1H470JFN	C.CAPACITOR CH 50V 47P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C764		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C765		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C783		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C789		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C797-99		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7661		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7662		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7663		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7664		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C7665,66		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7667		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7670,71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7673		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7675		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7676,77		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7678		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7679		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
			DIODES		
D710		MA3091-M	DIODE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
D711		MA3056-M	DIODE	1	
D771		MA151WK	DIODE	1	
D772,73		MA151K	DIODE	2	
D7601		MA151A	DIODE	1	
D7602		MA3082M	DIODE	1	
			INTEGRATED CIRCUITS		
IC701		AN5183K	IC	1	
IC7652		AN5043	IC	1	
			COILS		
L701		ELESQ101KA	COIL 100UH	1	
L711		VLQ0305JR27	COIL 0.27UH	1	
L716-18		ELESQ680KA	COIL 68UH	3	
L719		VLQEL05F120K	COIL 12UH	1	
L764		ELESQ470K	COIL 47UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SD1994	TRANSISTOR	1	
Q713		2SD1328-S	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
			COMBINATION PARTS		
QR701,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR713		MRN1402	TRANSISTOR-RESISTOR	1	
QR7601		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R701		ERJ6GEYJ184	M.RESISTOR CH 1/10W 180K	1	
R703		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R704		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R705		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R706		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R709		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R716		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R720		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R726		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R727		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R728		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R741		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R746		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R748		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R756		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R763		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R767		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7671,72		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7673		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7674		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7675		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7677		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7678		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R7679		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7680		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7691		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7695		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7696		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		
T703		EIV5EC039A	TRANSFORMER	1	
T704		EIV5EC036A	TRANSFORMER	1	
T711		EIS5EC018A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701		EVNCBAA00B23	V.RESISTOR	1	
VR751		EVNCBAA00B53	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X710		EFCH36MVK6N	CRYSTAL OSCILLATOR	1	
X711		VLF0638	CRYSTAL OSCILLATOR	1	
X712		EFCT5R5MS5	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV77881H3	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3379	SHIELD COVER (TOP)	1	
	■	VEP07629L	TV DEMODULATOR C.B.A.		(RTL)NV-SD10EA/AM,
					NV-SD20EA
			CAPACITORS		
C701,02		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C703		ECEA1HK2R2	E.CAPACITOR 50V 2.2U	1	
C705		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C706		ECUM1H104ZFG	CAPACITOR CH 50V 0.1U	1	
C707		ECEA1HKSR47	E.CAPACITOR 50V 0.47U	1	
C708,09		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C721-23		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C726		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C727		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C729		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C730		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C732		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C734		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C736		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C737		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C738		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C739,40		ECEA1HKR47	E.CAPACITOR 50V 0.47U	2	
C743		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C744		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C745		ECUM1H470JPN	C.CAPACITOR CH 50V 47P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C764		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C765		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C783		ECUM1H180JCN	C.CAPACITOR CH 50V 18P	1	
C789		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C797-99		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7661		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7662		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7663		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7664		ECQB1H273JH	P.CAPACITOR 50V 0.027U	1	
C7665,66		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7667		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7670,71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7673		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7675		ECEA1HKN010	E.CAPACITOR 50V 1U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C7676,77		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7678		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7679		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
			DIODES		
D710		MA3091-M	DIODE	1	
D711		MA3056-M	DIODE	1	
D771		MA151WK	DIODE	1	
D772,73		MA151K	DIODE	2	
D7601		MA151A	DIODE	1	
D7602		MA3082M	DIODE	1	
			INTEGRATED CIRCUITS		
IC701		AN5183K	IC	1	
IC7652		AN5043	IC	1	
			COILS		
L701		ELESQ101KA	COIL 100UH	1	
L711		VLQ0305JR27	COIL 0.27UH	1	
L716-18		ELESQ680KA	COIL 68UH	3	
L719		VLQEL05F120K	COIL 12UH	1	
L764		ELESQ470K	COIL 47UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043B006W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SD1994	TRANSISTOR	1	
Q713		2SD1328-S	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
			COMBINATION PARTS		
QR701,02		MRN1404	TRANSISTOR-RESISTOR	2	
QR713		MRN1402	TRANSISTOR-RESISTOR	1	
QR7601		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R701		ERJ6GEYJ184	M.RESISTOR CH 1/10W 180K	1	
R703		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R704		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R705		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R706		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R709		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R716		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R720		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R721		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R726		ERDS2TJ471	C.RESISTOR 1/4W 470	1	
R727		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	
R728		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R741		ERDS2TJ183	C.RESISTOR 1/4W 18K	1	
R746		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R748		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R756		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R763		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R767		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R772		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R792		ERDS2TJ120	C.RESISTOR 1/4W 12	1	
R795		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7671,72		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7673		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7674		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7675		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7677		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7678		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R7679		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7680		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7691		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7695		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7696		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		
T703		EIV5EC038A	TRANSFORMER	1	
T704		EIV5EC035A	TRANSFORMER	1	
T711		EIS5EC018A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701		EVNCBAA00B23	V.RESISTOR	1	
VR751		EVNCBAA00B53	V.RESISTOR	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MVK7N	CRYSTAL OSCILLATOR	1	
X711		VLF0638	CRYSTAL OSCILLATOR	1	
X712		EFCT5R5MS5	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV77880H3	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3379	SHIELD COVER (TOP)	1	
	■	VEP07705A	TV DEMODULATOR C.B.A.		(RTL)NV-SD25AM
			CAPACITORS		
C701,02		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C705		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C706		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C707		ECEA1HKR47	E.CAPACITOR 50V 0.47U	1	
C708,09		ECEA1CK100	E.CAPACITOR 16V 10U	2	
C710		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C721-23		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C725		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C726		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C727		ECEA1CK101	E.CAPACITOR 16V 100U	1	
C730		ECEA1CK330	E.CAPACITOR 16V 33U	1	
C732		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C734		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C737		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C738		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C739,40		ECEA1HKR47	E.CAPACITOR 50V 0.47U	2	
C743		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C745		ECUM1H470JPN	C.CAPACITOR CH 50V 47P	1	
C746		ECUM1H150JCN	C.CAPACITOR CH 50V 15P	1	
C748		ECQV1H563JZ	P.CAPACITOR 50V 0.056U	1	
C749		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C752		ECUM1H820JCN	C.CAPACITOR CH 50V 82P	1	
C753		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C754,55		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C756		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C757,58		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C764		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	
C765		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C767		ECCF1H150JC	C.CAPACITOR 50V 15P	1	
C771		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C773-75		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C783		ECUM1H270JCN	C.CAPACITOR CH 50V 27P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C790		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C797-99		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	3	
C7661		ECQV1H104JZ	P.CAPACITOR 50V 0.1U	1	
C7662		ECQV1H683JZ	P.CAPACITOR 50V 0.068U	1	
C7663		ECQV1H823JZ	P.CAPACITOR 50V 0.082U	1	
C7664		ECQB1H273KH	P.CAPACITOR 50V 0.027U	1	
C7665,66		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7667		ECEA1HKA100	E.CAPACITOR 50V 10U	1	
C7670,71		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7673		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7675		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
C7676,77		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C7678		ECEA1CKA220	E.CAPACITOR 16V 22U	1	
C7679		ECEA1HKN010	E.CAPACITOR 50V 1U	1	
			DIODES		
D701-05		MA57	DIODE	5	
D710		MA3091-M	DIODE	1	
D771		MA151WK	DIODE	1	
D773		MA151K	DIODE	1	
D7601		MA151A	DIODE	1	
D7602		MA3082M	DIODE	1	
			INTEGRATED CIRCUITS		
IC701		AN5183K	IC	1	
IC702		LA7975	IC	1	
IC7652		AN5043	IC	1	
			COILS		
L711		ELQTR56XB	COIL	1	
L714		ELJNAR56KF	COIL 0.56UH	1	
L718		ELESQ680KA	COIL 68UH	1	
L719		ELESQ5R6KA	COIL 5.6UH	1	
L720		ELESQ101KA	COIL 100UH	1	
L721		ELJFA151JB	COIL	1	
L722-24		ELESQ151KA	COIL 150UH	3	
L725		ELJFA151JB	COIL	1	
L751		ELJFA100JB	COIL	1	
L764		ELJFA470JB	COIL 47UH	1	
L767		ELESQ270KA	COIL 27UH	1	
			CONNECTORS		
PS701-03		VJS3043B005W	CONNECTOR (FEMALE)	3	
PS704		VJS3043F007W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q703		MSD601-S	TRANSISTOR	1	
Q712		2SD1994	TRANSISTOR	1	
Q713		2SD1328-S	TRANSISTOR	1	
Q771		MSD601-S	TRANSISTOR	1	
			COMBINATION PARTS		
QR702		MRN1404	TRANSISTOR-RESISTOR	1	
QR713		MRN1402	TRANSISTOR-RESISTOR	1	
QR715-24		MRN1404	TRANSISTOR-RESISTOR	10	
QR7601		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R701		ERJ6GEYJ184	M.RESISTOR CH 1/10W 180K	1	
R703		ERJ6GEYJ393	M.RESISTOR CH 1/10W 39K	1	
R704		ERJ6GEYJ154	M.RESISTOR CH 1/10W 150K	1	
R705		ERJ6GEYJ682	M.RESISTOR CH 1/10W 6.8K	1	
R706		ERJ6GEYJ121	M.RESISTOR CH 1/10W 120	1	
R709		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R716		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R720,21		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	2	
R726		ERJ6GEYJ471	M.RESISTOR CH 1/10W 470	1	
R727		ERDS2TJ122	C.RESISTOR 1/4W 1.2K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R728		ERDS2TJ331	C.RESISTOR 1/4W 330	1	
R730		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R739		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R741		ERJ6GEYJ183	M.RESISTOR CH 1/10W 18K	1	
R746		ERJ6GEYJ272	M.RESISTOR CH 1/10W 2.7K	1	
R748		ERDS2TJ151	C.RESISTOR 1/4W 150	1	
R751		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R752		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R756		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R758		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R759		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R763		ERJ6GEYJ392	M.RESISTOR CH 1/10W 3.9K	1	
R767		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R773		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R774		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R775-77		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	3	
R780,81		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	2	
R782		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R783		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R785		ERDS2TJ182	C.RESISTOR 1/4W 1.8K	1	
R788		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R792		ERJ6GEYJ120	M.RESISTOR CH 1/10W 12	1	
R793		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R7671,72		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	2	
R7673		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7674		ERJ6GEYJ124	M.RESISTOR CH 1/10W 120K	1	
R7675		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7676		ERG1SJ152	M.RESISTOR 1W 1.5K	1	
R7677		ERDS2TJ103	C.RESISTOR 1/4W 10K	1	
R7678		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	1	
R7679		ERDS2TJ100	C.RESISTOR 1/4W 10	1	
R7680		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7691		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7695		ERJ6GEYJ562	M.RESISTOR CH 1/10W 5.6K	1	
R7696		ERJ6GEYJ473	M.RESISTOR CH 1/10W 47K	1	
			TRANSFORMERS		
T703		EIV5EC041A	TRANSFORMER	1	
T704		EIV5EC040A	TRANSFORMER	1	
T711		EIS5EC019A	TRANSFORMER	1	
			VARIABLE RESISTORS		
VR701		EVNDXAA00B23	V.RESISTOR 2K	1	
VR751		EVNDXAA00B53	V.RESISTOR 5K	1	
			CRYSTAL OSCILLATORS		
X710		EFCH38MWV3	CRYSTAL OSCILLATOR	1	
X711		EFCT3F02W3B	CRYSTAL OSCILLATOR	1	
X712		EFCT6R0MS5	CRYSTAL OSCILLATOR	1	
X714		VSX0553	CRYSTAL OSCILLATOR	1	
X715		VSX0547	CRYSTAL OSCILLATOR	1	
X716		EFCA4504BFB	CRYSTAL OSCILLATOR	1	
X717		EFCT5744BF	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		ENV79828H3	TUNER	1	<!>
		VSC3242	SHIELD COVER (MAIN)	1	
		VSC3379	SHIELD COVER (TOP)	1	
	■	VEP05180B	HEAD AMP C.B.A.		(RTL)NV-SD10A/EA/AM
			CAPACITORS		
C501		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C503		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C504		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H620JCN	C.CAPACITOR 50V 62P	1	
C507		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C511		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C512		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C513,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C519		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C520		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C521,22		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C528,29		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C530,31		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C532		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C535-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	4	
			INTEGRATED CIRCUITS		
IC501		AN3336SB	IC	1	
			COILS		
L501		ELESQ101KA	COIL 100UH	1	
L502		ELESQ151KA	COIL 150UH	1	
L503		ELESQ820KA	COIL 82UH	1	
L504		ELESQ270JA	COIL 27UH	1	
L505		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1680	CONNECTOR (FEMALE)	1	
P502		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709	TRANSISTOR	1	
Q503		MSC2295	TRANSISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R502		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R503		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R506		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508,09		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R510		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R513		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R515		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R516		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R517		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R518		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R521		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R522		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R523-26		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R527		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC3770	SHIELD COVER (BOTTOM)	1	
		VSC3768	SHIELD COVER (TOP)	1	
		VSC3304	SHIELD COVER (MAIN)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP05180A	HEAD AMP C.B.A.		(RTL)NV-SD20A/EA, NV-SD25AM
			CAPACITORS		
C501		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C503		ECUM1H181JCN	C.CAPACITOR CH 50V 180P	1	
C504		ECUM1H680JCN	C.CAPACITOR CH 50V 68P	1	
C505		ECUM1H620JCN	C.CAPACITOR 50V 62P	1	
C507		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C508		ECEA0JK470	E.CAPACITOR 6.3V 47U	1	
C511		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C512		ECUM1C105ZFN	C.CAPACITOR 16V 1U	1	
C513,14		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C516,17		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C518		ECUM1H332KBN	C.CAPACITOR CH 50V 3300P	1	
C519		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C520		ECEA1HK010	E.CAPACITOR 50V 1U	1	
C521,22		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C523		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	1	
C524		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C525		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C526,27		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C528,29		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	2	
C530,31		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	2	
C532		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C535-38		ECUM1H102KBN	C.CAPACITOR CH 50V 1000P	4	
			INTEGRATED CIRCUITS		
IC501		AN3336SB	IC	1	
			COILS		
L501		ELESQ101KA	COIL 100UH	1	
L502		ELESQ151KA	COIL 150UH	1	
L503		ELESQ820KA	COIL 82UH	1	
L504		ELESQ270JA	COIL 27UH	1	
L505		ELESQ101KA	COIL 100UH	1	
			CONNECTORS		
P501		VJS1684	CONNECTOR (FEMALE)	1	
P502		VJS3069T	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q502		MSB709	TRANSISTOR	1	
Q503		MSC2295	TRANSISTOR	1	
			COMBINATION PARTS		
QR501		IMH6	TRANSISTOR	1	
QR502		MRN1404	TRANSISTOR-RESISTOR	1	
			RESISTORS		
R501		ERJ6GMYJ681	M.RESISTOR CH 1/10W 680	1	
R502		ERJ6GMYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R503		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R505		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	1	
R506		ERJ6GMYJ102	M.RESISTOR CH 1/10W 1K	1	
R507		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R508,09		ERJ6GMYJ561	M.RESISTOR CH 1/10W 560	2	
R510		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R513		ERJ6GMYJ152	M.RESISTOR CH 1/10W 1.5K	1	
R515		ERJ6GMYG752	M.RESISTOR CH 1/10W 7.5K	1	
R516		ERJ6GMYG133	M.RESISTOR CH 1/10W 13K	1	
R517		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R518		ERJ6GMYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R519		ERJ6GMYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R520		ERJ6GMYJ274	M.RESISTOR CH 1/10W 270K	1	
R521		ERJ6GMYJ391	M.RESISTOR CH 1/10W 390	1	
R522		ERJ6GMYJ331	M.RESISTOR CH 1/10W 330	1	
R523-26		ERJ6GMYJ470	M.RESISTOR CH 1/10W 47	4	
R527		ERJ6GMYJ100	M.RESISTOR 1/10W 10	1	
R528		ERJ6GMYJ103	M.RESISTOR CH 1/10W 10K	1	
R530		ERJ6GMYJ182	M.RESISTOR CH 1/10W 1.8K	1	
			VARIABLE RESISTORS		
VR501		EVND6AA00B23	V.RESISTOR 2K	1	
VR502		EVND6AA00B13	V.RESISTOR 1K	1	
			MISCELLANEOUS		
		VSC3770	SHIELD COVER (BOTTOM)	1	
		VSC3768	SHIELD COVER (MAIN)	1	
		VSC3304	SHIELD COVER (TOP)	1	
	■	VEP07701A	TIMER C.B.A.		(RTL)NV-SD10A
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
			DIODES		
D7501		MA3160	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7525		MA221	DIODE	1	
D7527		MA221	DIODE	1	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550		SEL2913KTP3	DIODE	1	
D7552,53		SEL2913KTP3	DIODE	2	
D7554-58		MA221	DIODE	5	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			RESISTORS		
R7501		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7541		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
			SWITCHES		
SW7501-03		EVQ11409K	SWITCH	3	
SW7506-11		EVQ11409K	SWITCH	6	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
SW7522,23		EVQ11409K	SWITCH	2	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2061	SHUTTLE HOLDER	1	
		VSQ0815	SHUTTLE ENCODER	1	
	■	VEP07701C	TIMER C.B.A.		(RTL)NV-SD10AM
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			DIODES		
D7501		MA3160	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7522		MA221	DIODE	1	
D7525		MA221	DIODE	1	
D7527		MA221	DIODE	1	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550		SEL2913KTP3	DIODE	1	
D7552,53		SEL2913KTP3	DIODE	2	
D7554-58		MA221	DIODE	5	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	
IR7501		VEK5788	IR RECEIVER UNIT	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501,02		VJS3193B013A	CONNECTOR (FEMALE)	2	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R7501		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7541		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
IR7501		VEK5788	IR RECEIVER UNIT	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501,02		VJS3193B013A	CONNECTOR (FEMALE)	2	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R7501		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540		ERJ6GEYJ391	M.RESISTOR CH 1/10W 390	1	
R7541		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	1	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
			SWITCHES		
SW7501-03		EVQ11409K	SWITCH	3	
SW7506-11		EVQ11409K	SWITCH	6	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
SW7522,23		EVQ11409K	SWITCH	2	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLAENOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2061	SHUTTLE HOLDER	1	
		VSQ0815	SHUTTLE ENCODER	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
	■	VEP07701L	TIMER C.B.A.		(RTL)NV-SD10EA
			CAPACITORS		
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZOROO	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
			DIODES		
D7501		MA3160	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7525		MA221	DIODE	1	
D7527		MA221	DIODE	1	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550		SEL2913KTP3	DIODE	1	
D7552,53		SEL2913KTP3	DIODE	2	
D7554-58		MA221	DIODE	5	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	
IR7501		VEK5788	IR RECEIVER UNIT	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501,02		VJS3193B013A	CONNECTOR (FEMALE)	2	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
			SWITCHES		
SW7501-03		EVQ11409K	SWITCH	3	
SW7506-16		EVQ11409K	SWITCH	11	
SW7517		VSS0303	SWITCH	1	
SW7522,23		EVQ11409K	SWITCH	2	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2061	SHUTTLE HOLDER	1	
		VSQ0815	SHUTTLE ENCODER	1	
	■	VEP07699A	TIMER C.B.A.		(RTL)NV-SD20A
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E1242FN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H1042FN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	
			DIODES		
D7501		MA3220	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7516		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-58		MA221	DIODE	5	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	
IR7501		VEK5788	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7501		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2035	JOG SHUTTLE HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07699L	TIMER C.B.A.		(RTL)NV-SD20EA
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E1242FN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H470JCN	C.CAPACITOR CH 50V 47P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	
			DIODES		
D7501		MA3220	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7516		MA221	DIODE	1	
D7520		MA221	DIODE	1	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-58		MA221	DIODE	5	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	
IR7501		VEK5788	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7501		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GEYK2R2	M.RESISTOR CH 1/10W 2.2	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	1	
		VMD2035	JOG SHUTTLE HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07699C	TIMER C.B.A.		(RTL)NV-SD25AM
			CAPACITORS		
C4801		ECEA1CK470	E.CAPACITOR 16V 47U	1	
C4802		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C4804		ECUM1E124ZFN	C.CAPACITOR CH 25V 0.12U	1	
C7501		ECRHA030E41	TRIMMER 3P	1	
C7502		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7503		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7504		ECUM1H060DCN	C.CAPACITOR CH 50V 6P	1	
C7505		ECEA1HKS100	E.CAPACITOR 50V 10U	1	
C7506		ECUM1H330JCN	C.CAPACITOR CH 50V 33P	1	
C7507		ECUM1H220JCN	C.CAPACITOR CH 50V 22P	1	
C7509		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
C7510		ECUM1H104ZFN	C.CAPACITOR CH 50V 0.1U	1	
C7511		ECEA1HKSR22	E.CAPACITOR 50V 0.22U	1	
C7512		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7513		ECUM1H103ZFN	C.CAPACITOR CH 50V 0.01U	1	
C7514		ECUM1H221JCN	C.CAPACITOR CH 50V 220P	1	
C7515		ECEA0JKS470	E.CAPACITOR 6.3V 47U	1	
C7518		ECEA1CK100	E.CAPACITOR 16V 10U	1	
C7519		ECEA1CK101	E.CAPACITOR 16V 100U	1	
			DIODES		
D7501		MA3220	DIODE	1	
D7504		MA221	DIODE	1	
D7508		MA221	DIODE	1	
D7512		MA221	DIODE	1	
D7516		MA221	DIODE	1	
D7520-23		MA221	DIODE	4	
D7525-27		MA221	DIODE	3	
D7535		MA221	DIODE	1	
D7537		MA221	DIODE	1	
D7541		MA221	DIODE	1	
D7546-49		LN376GCPXU	DIODE	4	
D7550-53		SEL2913KTP3	DIODE	4	
D7554-57		MA221	DIODE	4	
			DISPLAY TUBES		
DP7501		VSL0271	DISPLAY TUBE	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			INTEGRATED CIRCUITS		
IC7501		MN187164VTSU	IC	1	
IC7502		PST7026	IC	1	
IC7503		PST7043	IC	1	
IC7504		M6M80021P	IC	1	
IR7501		VEK5788	IR RECEIVER UNIT	1	
			JACKS		
J4801		VJJ0281	MIC JACK	1	
			COILS		
L7501		ELESE151K	COIL 150UH	1	
			CONNECTORS		
P7501		VJS3193B013A	CONNECTOR (FEMALE)	1	
P7502		VJS3193B015A	CONNECTOR (FEMALE)	1	
P7505		VJS3301	CONNECTOR (FEMALE)	1	
PP7501		VJP3042A004W	CONNECTOR (MALE)	1	
PP7502		VJS3404A005A	CONNECTOR (FEMALE)	1	
PS4801		VJS3042B004W	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q4801		2SA1034	TRANSISTOR	1	
Q4802		2SC2405	TRANSISTOR	1	
Q7508		MSD601	TRANSISTOR-RESISTOR	1	
Q7510		MSD601	TRANSISTOR-RESISTOR	1	
			COMBINATION PARTS		
QR7501		MRN1404	TRANSISTOR-RESISTOR	1	
QR7503-06		MRN2404	TRANSISTOR-RESISTOR	4	
			RESISTORS		
R4801		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4802		ERJ6GEYJ153	M.RESISTOR CH 1/10W 15K	1	
R4803		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R4804		ERJ6GEYJ333	M.RESISTOR CH 1/10W 33K	1	
R4805		ERJ6GEYJ331	M.RESISTOR CH 1/10W 330	1	
R4806		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R4807		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R4808		ERJ6GEYJ472	M.RESISTOR CH 1/10W 4.7K	1	
R7501		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7502		ERJ6GEYJ104	M.RESISTOR CH 1/10W 100K	1	
R7503		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7504		ERJ6GEYJ101	M.RESISTOR CH 1/10W 100	1	
R7512		ERJ6GEYJ122	M.RESISTOR CH 1/10W 1.2K	1	
R7513		ERJ6GEYJ224	M.RESISTOR CH 1/10W 220K	1	
R7514		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7515,16		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7517		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7518,19		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	2	
R7521,22		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	2	
R7531		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7532		ERJ6GMZ0R00	M.RESISTOR CH 1/10W 0	1	
R7535		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7536		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	1	
R7537		ERJ6GEYJ182	M.RESISTOR CH 1/10W 1.8K	1	
R7538,39		ERJ6GEYJ222	M.RESISTOR CH 1/10W 2.2K	2	
R7540,41		ERJ6GEYJ271	M.RESISTOR CH 1/10W 270	2	
R7544,45		ERJ6GEYJ223	M.RESISTOR CH 1/10W 22K	2	
R7548		ERJ6GEYJ681	M.RESISTOR CH 1/10W 680	1	
R7549		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
R7550		ERJ6GEYJ102	M.RESISTOR CH 1/10W 1K	1	
R7552-55		ERJ6GEYJ221	M.RESISTOR CH 1/10W 220	4	
R7558		ERJ6GEYJ103	M.RESISTOR CH 1/10W 10K	1	
R7560		ERJ6GEYJ332	M.RESISTOR CH 1/10W 3.3K	1	
R7562		ERJ6GEYJ152	M.RESISTOR CH 1/10W 1.5K	1	
			SWITCHES		
SW7501-11		EVQ11409K	SWITCH	11	
SW7513-16		EVQ11409K	SWITCH	4	
SW7517		VSS0303	SWITCH	1	
SW7518		VSS0335	SWITCH	1	
			CRYSTAL OSCILLATORS		
X7501		VSX0506	CRYSTAL OSCILLATOR	1	
X7502		VSX0094	CRYSTAL OSCILLATOR	1	
			MISCELLANEOUS		
		VJF0915	FIP HOLDER	1	
		VMD2060	LED HOLDER	1	
		VGU6139	SLIDE SWITCH KNOB	2	
		VMD2035	JOG HOLDER	1	
		VSQ0811	JOG SHUTTLE ENCODER	1	
	■	VEP07716A	OPERATION C.B.A.		(RTL)NV-SD20A,EA, NV-SD25AM
			CONNECTORS		
PP6601		VJP3404A005W	CONNECTOR (MALE)	1	
			SWITCHES		
SW6601,02		EVQ11409K	SWITCH	2	
	■	VEP01518F	POWER C.B.A.		(RTL)<!>NV-SD10A,20A
			CAPACITORS		
C1101		VCC0019	C.CAPACITOR 330P	1	<!>
C1106		VCC0019	C.CAPACITOR 330P	1	<!>
C1108		ECQU2A333MNB	P.CAPACITOR 250V 0.033U	1	<!>
C1109		ECEC2GG330	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H1022F	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101	E.CAPACITOR 16V 100U	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	
D1108		MA4024-H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
			COILS		
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD1458	TRANSISTOR	1	
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD1458	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0699	TRANSFORMER	1	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
		VMZ1184	CAPACITOR COVER (B)	3	<!>
	■	VEP01518E	POWER C.B.A.		(RTL)<!>
					NV-SD10EA,20EA
			CAPACITORS		
C1101		VCC0021	C.CAPACITOR	1	<!>
C1106		VCC0021	C.CAPACITOR	1	<!>
C1107		ECQU2A154MNB	P.CAPACITOR 250V 0.15U	1	<!>
C1108		ECQU2A683MN	P.CAPACITOR 250V 0.068U	1	<!>
C1109		ECEC2GG330	CAPACITOR	1	
C1110		ECQV1H124JZ	P.CAPACITOR 50V 0.12U	1	
C1111		ECQB1H153JF	P.CAPACITOR 50V 0.015U	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K221	CAPACITOR	1	
C1117		ECQB1H123JF	P.CAPACITOR 50V 0.012U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECQB1H223JF	P.CAPACITOR 50V 0.022U	1	
C1130		ECA1CGE101	E.CAPACITOR 16V 100U	1	
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1102		1SS254	DIODE	1	
D1103		VSD0002	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1105		1SS254	DIODE	1	
D1106,07		MA178	DIODE	2	
D1108		MA4024-H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
D1116		SNR-300K4	SURGE ABSORBER	1	<!>
D1117		MA2200B	DIODE	1	
D1118		1SS254	DIODE	1	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
			COILS		
L1107		ELF18D221F	COIL 220UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
			TRANSISTORS		
Q1101		2SC4300	TRANSISTOR	1	<!>
Q1102		2SD1458	TRANSISTOR	1	
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
Q1108		2SD1458	TRANSISTOR	1	
Q1109		2SD1996	TRANSISTOR	1	
			RESISTORS		
R1101		ERC12AGM334	S.RESISTOR 1/2W 330K	1	<!>
R1102		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1103		ERG2SJ680	M.RESISTOR 2W 68	1	
R1104		ERX1SJ1R2	M.RESISTOR 1W 1.2	1	
R1105		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ820	C.RESISTOR 1/4W 82	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ102	C.RESISTOR 1/4W 1K	1	
R1121		ERDS1TJ154	C.RESISTOR 1/2W 150K	1	
R1122,23		ERDS2FJ474	C.RESISTOR 1/4W 470K	2	
R1124		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1125		ERDS2FJ104	C.RESISTOR 1/4W 100K	1	
			TRANSFORMERS		
T1101		VLT0699	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>
		VMZ1184	CAPACITOR COVER (B)	3	<!>
	■	VEP01525A	POWER C.B.A.		(RTL)<!>
					NV-SD10AM,25AM
			CAPACITORS		
C1101		VCC0019	C.CAPACITOR 330P	1	<!>
C1106		VCC0019	C.CAPACITOR 330P	1	<!>
C1108		ECQU2A333MV	P.CAPACITOR 250V 0.033U	1	<!>
C1109		ECEC2GG680	CAPACITOR	1	
C1110		ECKF1H102KB	C.CAPACITOR 50V 1000P	1	
C1111		ECKF1H271KB	C.CAPACITOR 50V 270P	1	
C1114		VCC0022	C.CAPACITOR 1000P	1	<!>
C1115		ECQE6473KF	P.CAPACITOR 50V	1	
C1116		VCK0106K121	CAPACITOR	1	
C1117		ECA1VXLV470	E.CAPACITOR 35V 47U	1	
C1118		ECEA1JFE470	E.CAPACITOR 63V 47U	1	
C1119		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1120,21		ECEA1DFZ681	E.CAPACITOR 20V 680U	2	
C1122		ECEA1VFE820	E.CAPACITOR 35V 82U	1	
C1123		ECEA1DFZ331	E.CAPACITOR 20V 330U	1	
C1124,25		ECEA1AFZ331X	E.CAPACITOR 10V 330U	2	
C1126		ECQB1H103JF	P.CAPACITOR 50V 0.01U	1	
C1127		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1128		ECA1CGE101X	E.CAPACITOR 16V 100U	1	
C1129		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1130		ECA0GXLV331	CAPACITOR	1	

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
C1131		ECCD2H101J	C.CAPACITOR 500V 100P	1	
C1133		ECKF1H102ZF	C.CAPACITOR 50V 1000P	1	
C1134-39		ECKF1H103ZF	C.CAPACITOR 50V 0.01U	6	
C1140		ECQV1H474JZ	P.CAPACITOR 50V 0.47U	1	
			DIODES		
D1101		S1WBA60S	DIODE	1	<!>
D1104		AP01C	DIODE	1	
D1106		MA723VT	DIODE	1	
D1107		MA178	DIODE	1	
D1108		MA4200H	DIODE	1	
D1109		AU01Z	DIODE	1	
D1110		RL2Z	DIODE	1	
D1111		MA185	DIODE	1	
D1112,13		11EQS04	DIODE	2	
D1114,15		MA178	DIODE	2	
			INTEGRATED CIRCUITS		
IC1101		TL431CLP	IC	1	
IC1102		STRM6545LF	IC	1	<!>
			COILS		
L1106		VLP0074	COIL	1	
L1107		ELF18D290A	COIL 29UH	1	<!>
L1108		VLQ0410	COIL	1	
L1109		VLQ0579	COIL	1	
L1110		ELESE101KA	COIL 100UH	1	
L1113		EXCELSA35	COIL	1	
			CONNECTORS		
P1101		VJS2625	CONNECTOR (FEMALE)	1	<!>
P1102		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1103		PS2561L1-1	TRANSISTOR-PHOTO COUPLER	1	<!>
Q1105		2SD1991	TRANSISTOR	1	
Q1106		2SD2375	TRANSISTOR	1	
			RESISTORS		
R1102		ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
R1103		ERDS2FJ561	C.RESISTOR 1/4W 560	1	
R1104		ERX1SJR82	M.RESISTOR 1W 0.82	1	
R1105		ERDS2FJ103	C.RESISTOR 1/4W 10K	1	
R1106		ERF2TK2R2	W.RESISTOR 2.2	1	
R1107		ERG3SJ683	M.RESISTOR 3W 68K	1	
R1108		ERDS2TJ271	C.RESISTOR 1/4W 270	1	
R1109		ERDS2TJ561	C.RESISTOR 1/4W 560	1	
R1110		ERDS2TJ272	C.RESISTOR 1/4W 2.7K	1	
R1111,12		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	2	
R1113		EROS2CKG2702	M.RESISTOR 1/4W 27K	1	
R1114		ERDS1TJ472	C.RESISTOR 1/2W 4.7K	1	
R1115		ERDS2FJ221	C.RESISTOR 1/4W 220	1	
R1118		EROS2CKG2701	M.RESISTOR 1/4W 2.7K	1	
R1119		EROS2CKG2401	M.RESISTOR 1/4W 2.4K	1	
R1120		ERDS2FJ471	C.RESISTOR 1/4W 470	1	
R1121		ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
R1122		ERDS1TJ395	C.RESISTOR 1/2W 3.9M	1	
R1123		ERDS1TJ475	C.RESISTOR 1/2W 4.7M	1	
R1124		ERDS2FJ152	C.RESISTOR 1/4W 1.5K	1	
R1125		ERDS2FJ101	C.RESISTOR 1/4W 100	1	
R1126		ERDS2FJ224	C.RESISTOR 1/4W 220K	1	
			TRANSFORMERS		
T1101		VLT0700	TRANSFORMER	1	<!>
			MISCELLANEOUS		
		VJF0318	FUSE HOLDER	2	<!>

Ref.No.		Part No.	Part Name & Description	Pcs	Remarks
		VMZ1184	CAPACITOR COVER (B)	3	<!>
	■	---------	MECHANISM CONNECTION C.B.A.		(RTL)
			DIODES		
D1501		LN59L.VT	DIODE	1	
			INTEGRATED CIRCUITS		
IC1501,02		ON1387	IC	2	
			CONNECTORS		
P1503		VJS3316A002	CONNECTOR (FEMALE)	1	
P1504		VJS3317A004	CONNECTOR (FEMALE)	1	
P1505		VJS3193B013A	CONNECTOR (FEMALE)	1	
			TRANSISTORS		
Q1501,02		PN205L-NC.VT	TRANSISTOR	2	
			SWITCHES		
SW1501		VES0695	SAFETY SWITCH	1	
			MISCELLANEOUS		
		VMD2029	REEL GUIDE	1	
	■	VEP00S86A	POWER TRANSISTOR C.B.A.		(RTL)
			CONNECTORS		
P1506		VJP1230T	CONNECTOR (MALE) 3P	1	
			TRANSISTORS		
Q1503		2SB941QBB	TRANSISTOR	1	
	■	---------	MOTOR C.B.A.		(RTL)
			MISCELLANEOUS		
		VJP3316B002	CONNECTOR (MALE)	1	